ORDER NO. AD9004076A8

Service Manual

Mini Cassette

Stereo Radio Cassette Player

RQ-V500

- Please file and use this manual together with the service manual for model No. RQ-V500 order No. AD9001010C1.
- This service manual indicates the main differences between; Original RQ-V500 (P).
- Refer to the Schematic Diagram and Circuit Board and Wiring Connection Diagram of this Service Manual.

Color

(K)... Black Type

Area

Country Code	Area	Color
(E)	Continental Europe.	(K)
(EG)	F.R. Germany & Italy.	
(GC)	Saudi Arabia.	
(GN)	Oceania.	

CHANGES

■ SPECIFICATIONS

RQ-V500 (P)

General:

Output: Headphones; 20Ω, φ3.5

Radio Section:

Radio Frequency Range: FM; 87.5~108MHz
AM; 520~1710kHz

Intermediate Frequency: FM; 10.7MHz
AM; 450kHz

RQ-V500 (E, EG, GC, GN)

General:

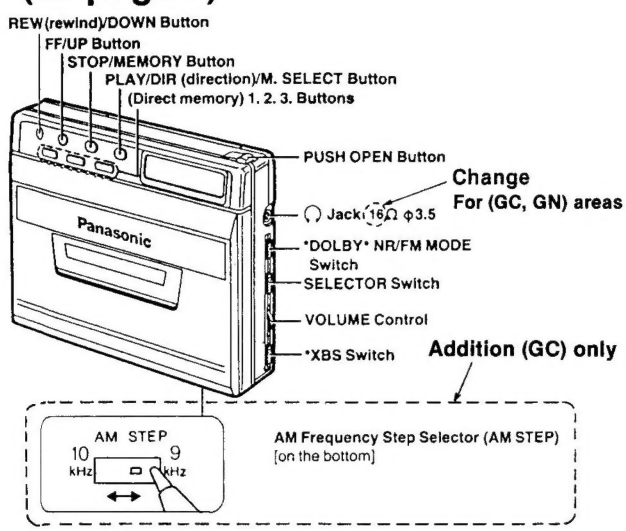
Output: Headphones; 16Ω, φ3.5 **(GC, GN)**

Radio Section:

Radio Frequency Range: FM; 87.5~108MHz
AM; 531~1602kHz (9kHz Step)
530~1600kHz (10kHz Step) **(GC)**
522~1629kHz **(E, EG, GN)**

Intermediate Frequency: FM; 10.7MHz
AM; 450kHz **(GC)**
459kHz **(E, EG, GN)**

■ LOCATION OF CONTROLS (on page 2)



■ PROCEDURES FOR DISASSEMBLY OF THE MAIN PARTS ON THE MECHANISM (on page 5)

Deletion

- **How to remove the plunger**
  1. Follow the procedures in Ref. Nos. 1~4 in the Disassembly Instructions. (See pages 6, 7.)
  2. Remove one screw (❶). (See Fig. 7.)
  3. Remove the washer and lever in order to remove the plunger. (See Fig. 8.)

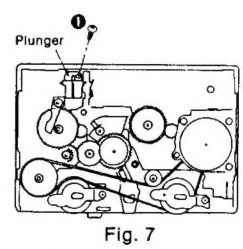


Fig. 7

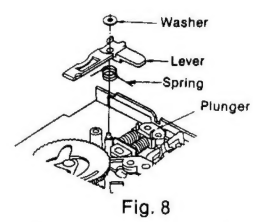


Fig. 8

Panasonic®

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

■ MEASUREMENTS AND ADJUSTMENTS (on page 11)

• **AM ADJUSTMENT**

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT POINT	REMARKS
	CONNECTIONS	FREQUENCY				
AM-RF ADJUSTMENT						
AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	600kHz	Tune to signal.	Headphones jack (20Ω) (Refer to Fig. 1)	(*1) L2 (AM ANT Coil)	Adjust for maximum output. Adjust L2 by moving coil bobbin along ferrite core.
AM		1,500kHz			CT1 (AM ANT Trimmer)	Adjust for maximum output.
(*1) Cement antenna bobbin with wax after completing alignment.						

RQ-V500 (P)

For (GC, GN) areas

AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	594kHz	Tune to signal.	Headphones jack (16Ω) (Refer to Fig. 1)	(*1) L2 (AM ANT Coil)	Adjust for maximum output. Adjust L2 by moving coil bobbin along ferrite core.
AM		1,404kHz			CT1 (AM ANT Trimmer)	Adjust for maximum output.
(*1) Cement antenna bobbin with wax after completing alignment.						

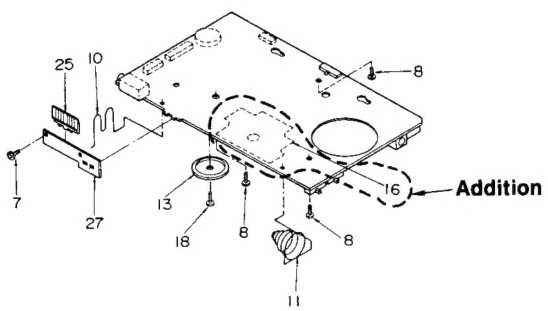
RQ-V500 (E, EG, GC, GN)

■ REPLACEMENT PARTS LIST

Ref. No.	Change of Part No. RQ-V500 (P) → **RQ-V500 (E, EG, GC, GN)**		Part Name & Description	Remarks
TRANSISTOR (S)				
Q514	——	**2SB1218STW**	TRANSISTOR	(GC) Addition
DIODE (S)				
D504	——	**MA110TW**	DIODE	(GC) Addition
D505	——	**MA110TW**	DIODE	(E, EG, GN) Addition
D506	——	**MA110TW**	DIODE	(GC) Addition
COIL (S)				
L2	RLV2N008-0	**RLV2N010-0**	COIL, AM ANT	(E, EG, GN) Change
		RLV2N011-0	COIL, AM ANT	(GC) Charge
FILTER (S)				
CF1	RLFFETWLA03D	**RLFAPFB459J**	FILTER, AM	(E, EG, GN) Change
		RLFAPFB450J	FILTER, AM	(GC) Change
CF2	RLFFETWLA03D	**RLFFETWA03D**	FILTER, FM	Change
CF3	RLFAPFB450J	**RLFFEHWLA03D**	FILTER, FM	Change
SWITCH (ES)				
S501	——	**RSS2A003-A**	SW, AM STEP	(GC) Addition
RESISTOR (S)				
R19	ERJ3GEYJ100V	**ERJ6GEYJ100V**	RESISTOR, 1/10W 10	Change
R301	ERJ3GEYJ102V	**ERJ3GEYJ182V**	RESISTOR, 1/16W 1.8K	Change
R305	ERJ6GEYJ272V	**ERJ6GEYJ392V**	RESISTOR, 1/10W 3.9K	Change
R516	——	**ERJ6GEYJ105V**	RESISTOR, 1/10W 1M	(GC) Addition
R518	——	**ERJ6GEYJ224V**	RESISTOR, 1/10W 220K	(GC) Addition
JUMPER RESISTOR (S)				
RJ1	ERJ6GEYJ000V	**ERJ6GEY0R00V**	CHIP JUMPER	Change
RJ4	ERJ3GEYJ000V	——	——	Deletion
CAPACITOR (S)				
C7	ECUV1H050DCN	——	——	Deletion
C22	ECST0GB226RR	**ECST0GB106RR**	CAPACITOR, 4V 10μ	Change
C44	ECEA0JKS101I	**ECEA0GKS101I**	CAPACITOR, 4V 100μ	Change
C147	ECEA1EK2R2L	**ECEA1EKS2R2L**	CAPACITOR, 25V 2.2μ	Change
C148	ECUV1E473MBN	**ECUV1E473ZF**	CAPACITOR, 25V 0.047μ	(GC) Change
		——	——	(E, EG, GN) Deletion

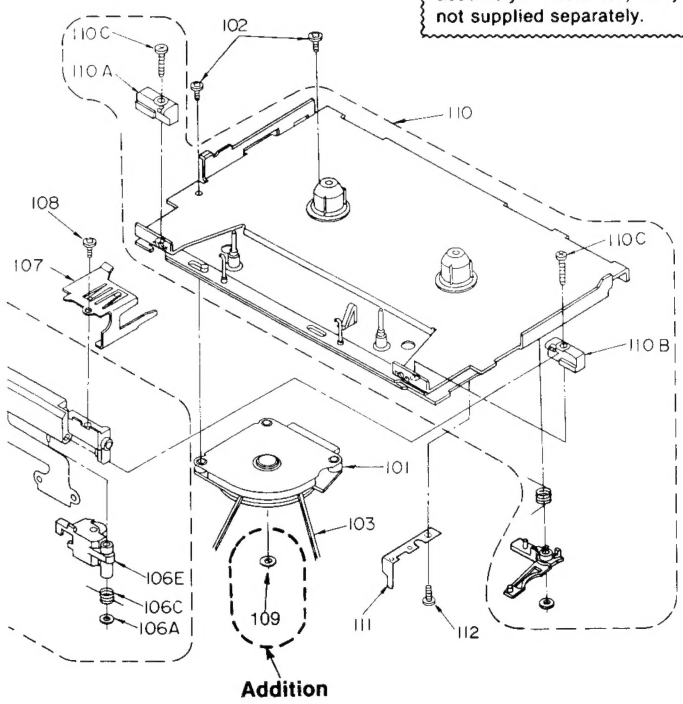
Ref. No.	Change of Part No.		Part Name & Description	Remarks
	RQ-V500 (P)	**RQ-V500 (E, EG, GC, GN)**		
C155	ECUV1C154KR	**ECUV1C154ZFM**	CAPACITOR, 16V 0.15µ	Change
C255	ECUV1C154KR	**ECUV1C154ZFM**	CAPACITOR, 16V 0.15µ	Change
C364	ECUV1E103MBV	**ECUV1E103ZFV**	CAPACITOR, 25V 0.01µ	Change
C513	——	**ECUV1C223MBV**	CAPACITOR, 16V 0.022µ	(GC) Addition
C517	ECUV1E103MBV	——	——	Deletion
CABINET AND CHASSIS				
16	——	**RSC0123**	SHIELD PLATE (B)	Addition
21	RFKJQV500P-K	**RFKJQV500E-K**	BOTTOM BOARD ASS'Y	(E, EG) Change
		RFKJQV500GC	BOTTOM BOARD ASS'Y	(GC) Change
		RFKJQV500P-K	BOTTOM BOARD ASS'Y	(GN)
28	RJB0352A	**RJB0352A-2**	PANEL SW P.C.B.	Change
MECHANISM PARTS				
109	——	**RHW42002**	WASHER	Addition
110	RXY0007	**RFKRQV500P-K**	MECHANISM BLOCK	Change
110D	RML0033-1	——	——	Deletion
110E	RHR3331ZB	——	——	Deletion
110F	RME0006	——	——	Deletion
PACKING MATERIAL				
P1	RPK0126	**RPK0148**	GIFT BOX	Change
P2	RPN0294	**RPN0336**	CUSHION	Change
P3	RPN0312	**RPN0337**	PAD	Change
P4	RPQ0024	**XZB12X18A04**	PROTECTION BAG	Change
ACCESSORIES				
A1	RQT0339-P	**RQT0450-E**	INSTRUCTION MANUAL	(E, EG) Change
		RQT0451-G	INSTRUCTION MANUAL	(GC, GN) Change
A2	RQX9028ZD	**RQCB0169**	SERVICENTER LIST	Change
A4	RP-HT106PY	**RP-HV135SY-0**	HEADPHONES	(E, EG) Change
		RP-HV134SY-0	HEADPHONES	(GC, GN) Change
A5	——	**RQA0013A**	WARRANTY CARD	(E, EG) Addition
A5	——	**RQX7434ZA**	WARRANTY CARD	(GN) Addition

■ CABINET PARTS LOCATION

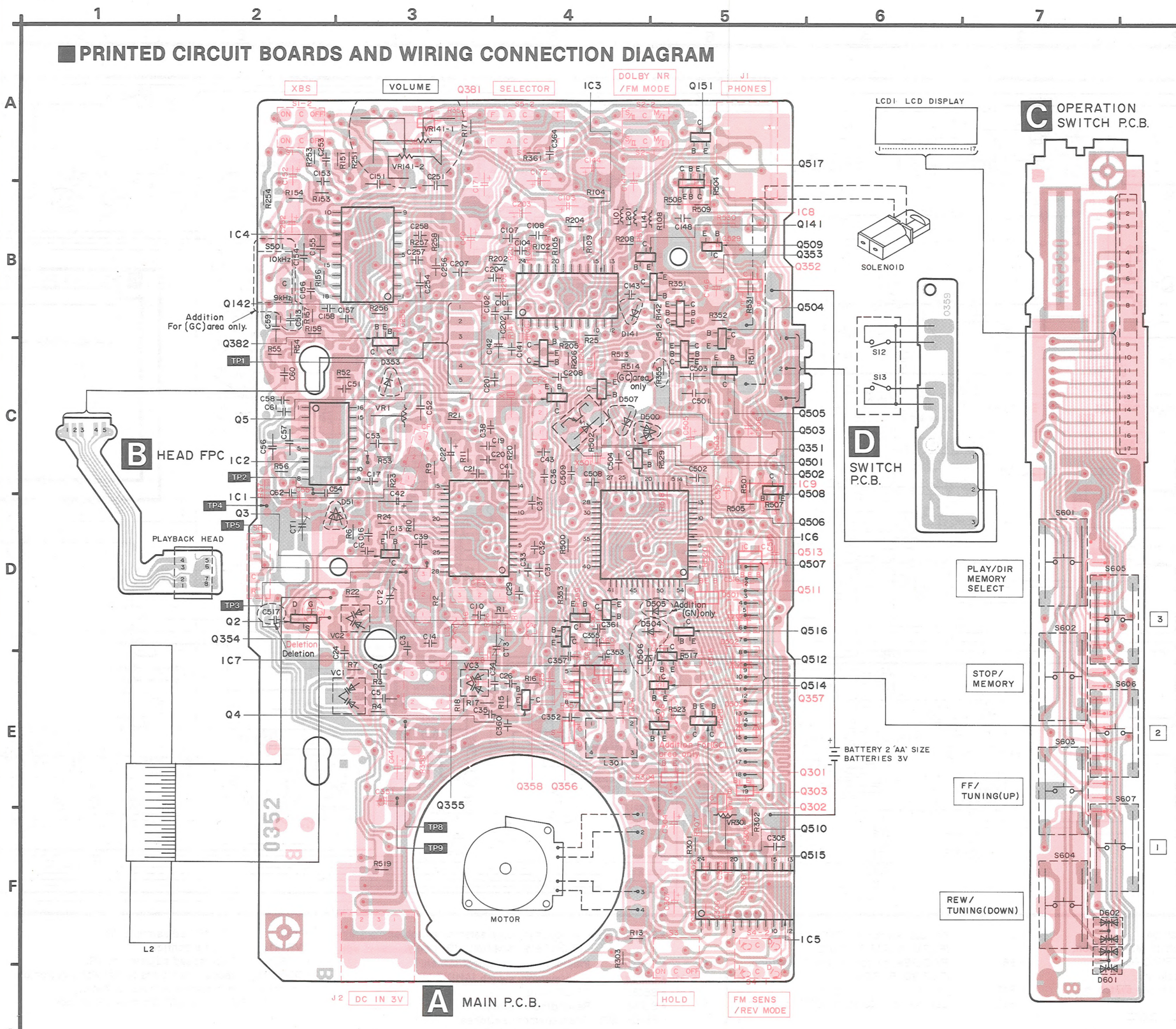


■ MECHANISM PARTS LOCATION

The parts enclosed in the dotted boxes are supplied as a block assembly. Therefore, they are not supplied separately.



■ PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM



Notes:

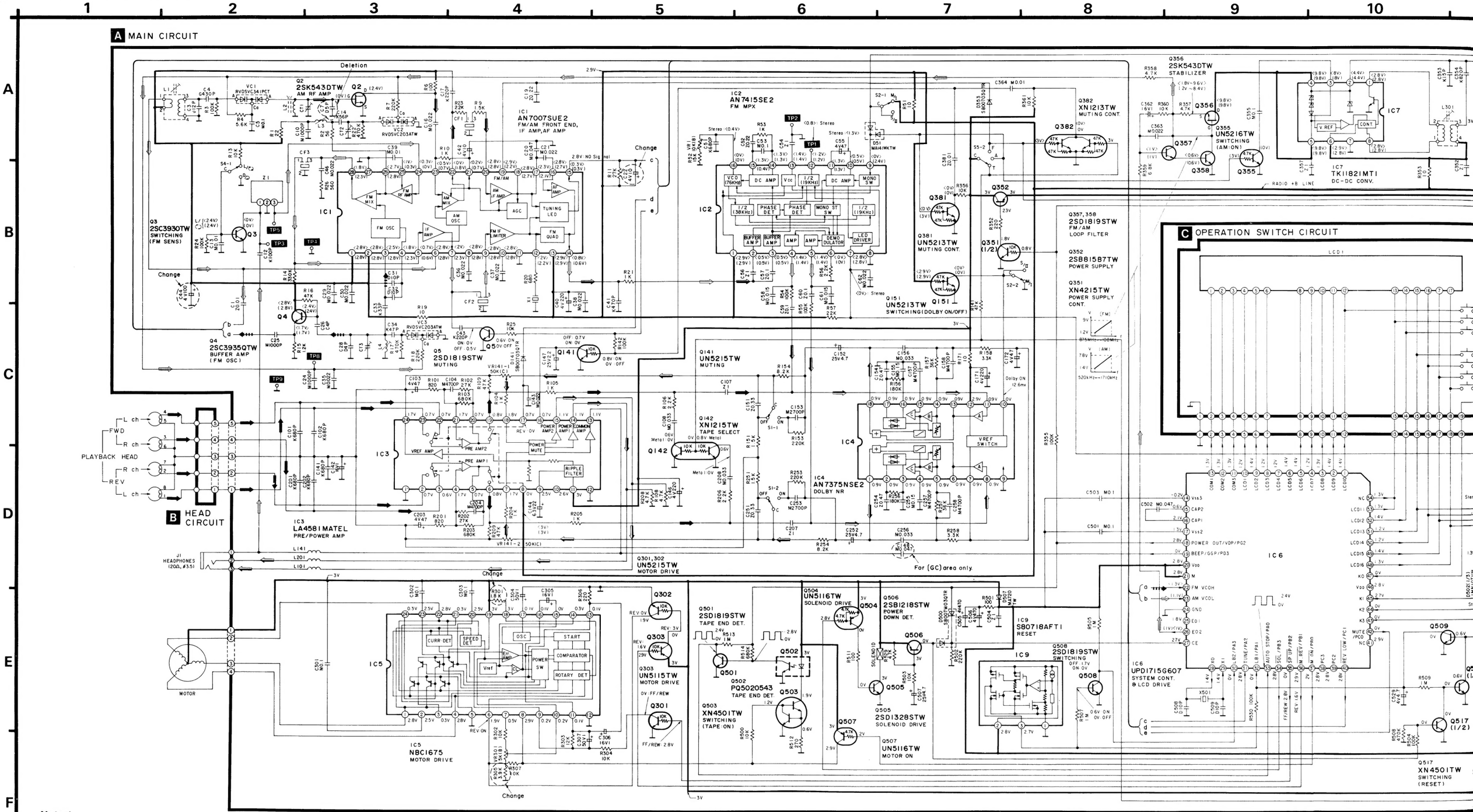
This diagram shows a front view of the IC mounting surface.

1. The circuit shown in ( ) on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in ( ) on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols (•) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.
4. —— : Chip resistor
5. ▬ : Chip jumper (0Ω)

• This circuit board diagram may be modified at any time with the developement of new technology.

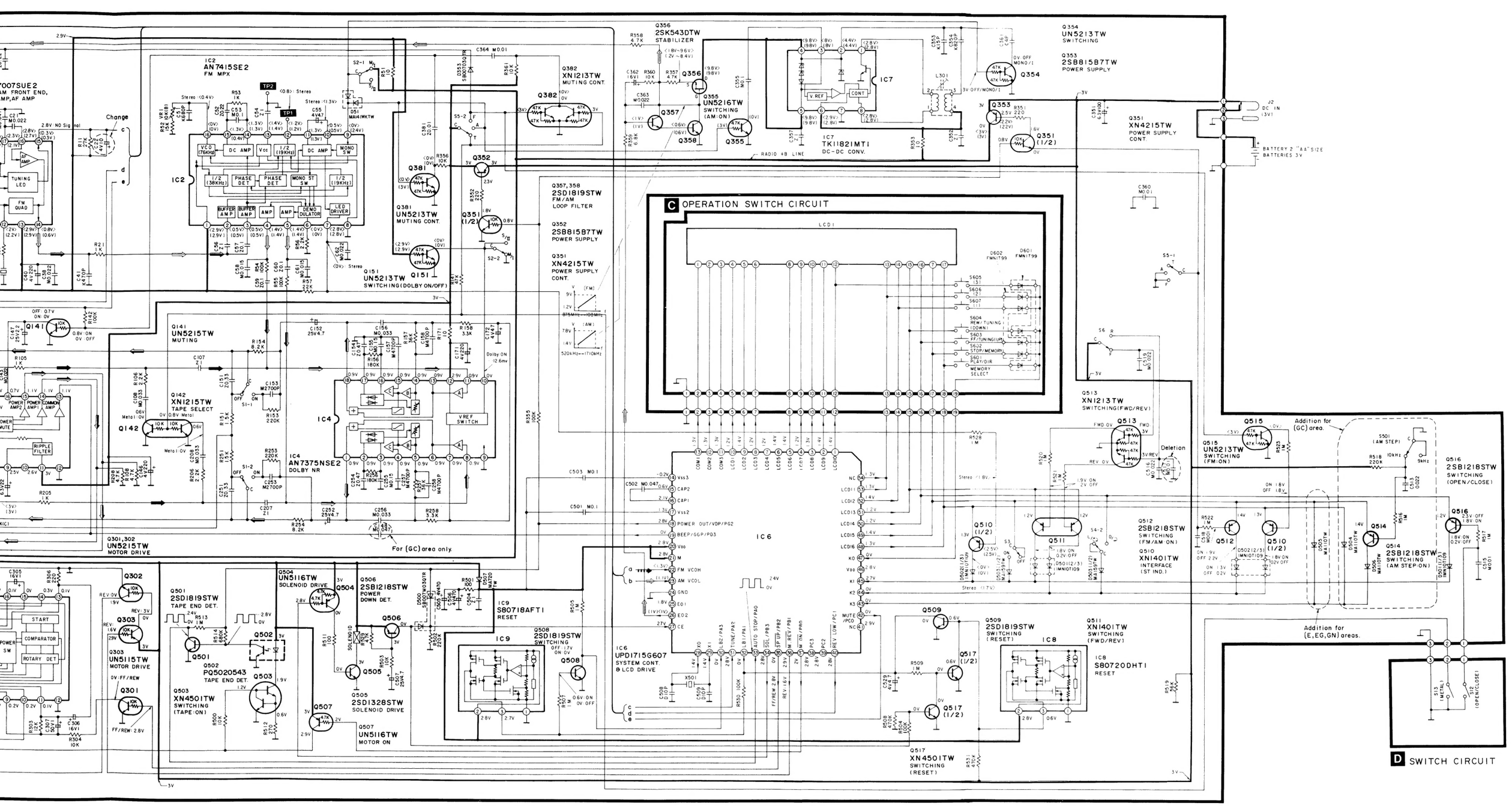
RQ-V500 RQ-V500

SCHEMATIC DIAGRAM



Notes)

- S1: XBS switch in "OFF" position.
- S2: Dolby NR/FM mode switch in "M/I" position. (S/II...ON/ST/II, M/I...OFF/MONO/I)
- S3: Hold switch in "OFF" position.
- S4: FM sens (sensitivity)/REV mode switch in "L/⇄" position. (L/⇄...LOCAL/⇄, D/⇄...DX/⇄)
- S5: Selector switch in "TAPE" position. (F...FM, A...AM, T...TAPE)
- S6: FWD/REV. switch in "FWD" position. (F...FWD, R...REV)
- S12: Leaf switch (open/close).
- S13: Leaf switch (Metal) in "OFF" position.
- S501: AM frequency step selector switch on "10kHz" step position...**(GC) only.**
- S601: Play/direction/M. select switch.
- S602: Stop/memory switch.
- S603: FF/UP switch.
- S604: Rewind/down switch.
- S605~607: Direct memory switches. [S605 : 3, S606 : 2, S607 : 1]
- VR1: FM MPX adjustment VR.
- VR141: Volume control.
- VR301: Tape speed adjustment VR.
- DC voltage measurements are taken with electronics voltmeter from negative terminal of battery. < >...FM, ( )...AM, No mark...Playback
- Battery current:
  No signal: (AM)...
  (FM)...
  Tape playback: 140mA
- 74dB/m • 30% MOD 54m
- 60dB • 30% MOD 71mA



"TAPE" position.
TAPE)
n "FWD" position.

close).
in "OFF" position.

- S501: AM frequency step selector switch on "10kHz" step position...**(GC) only.**
- S601: Play/direction/M. select switch.
- S602: Stop/memory switch.
- S603: FF/UP switch.
- S604: Rewind/down switch.
- S605~607: Direct memory switches. [S605 : 3, S606 : 2, S607 : 1]

- VR1: FM MPX adjustment VR.
- VR141: Volume control.
- VR301: Tape speed adjustment VR.
- DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
  < >...FM, ( )...AM, No mark...Playback

- Battery current:
  No signal: (AM)...47.2mA (VR: MAX)
  (FM)...59.2mA (VR: MAX)
  Tape playback: 140mA (VR: MAX)
- 74dB/m • 30% MOD 54mA (VR max)
- 60dB • 30% MOD 71mA (VR max)

- **This schematic diagram may be modified at any time with the development of new technology.**

: FM/AM Vcap CONTROL SIGNAL
: AM SIGNAL
: PLAYBACK SIGNAL
: MAIN (TAPE/RADIO) SIGNAL
: ⊕ B LINE
: FM OSC SIGNAL
: AM OSC SIGNAL

Printed in Japan
H900311000 YU/TM

ORDER NO. AD9001010C1
A1

Service Manual

Mini Cassette

Stereo Radio Cassette Player

RQ-V500

DOLBY SYSTEM*

Color

(K)...Black Type

Area

Country Code	Area	Color
(P)	U.S.A.	(K)
(PC)	Canada.	

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

AR90 MECHANISM SERIES

■ SPECIFICATIONS

General:

Power Requirement:	Battery; 3V (two R6/LR6, "AA" size batteries) AC; with optional Panasonic AC adaptor RP-AC33
Power Output:	15mW+15mW...RMS (max.)
Input:	DC IN; 3V (mini type) ⊖—◉—⊕
Output:	Headphones; 20Ω, φ3.5
Dimensions:	$4^{7}/_{16}$" × $3^{7}/_{16}$" × $1^{1}/_{16}$"
(W × H × D)	(113 × 87.7 × 26.6mm)
Weight:	6.7oz (190g) without batteries

Radio Section:

Radio Frequency Range:	FM; 87.5~108MHz AM; 520~1710kHz
Intermediate Frequency:	FM; 10.7MHz AM; 450kHz
Sensitivity:	FM; 3.5μV/−3dB Limit sense AM; 316μV/m/0.1mW output

Tape Deck Section:

Frequency Response:	Normal; 30~18,000Hz CrO_2; 30~18,000Hz Metal; 30~18,000Hz
Motor:	Electrical governor motor
Track System:	4-track 2-channel stereo playback
Tape Speed:	1-7/8ips (4.8cm/s)

Design and specifications are subject to change without notice.

Panasonic®

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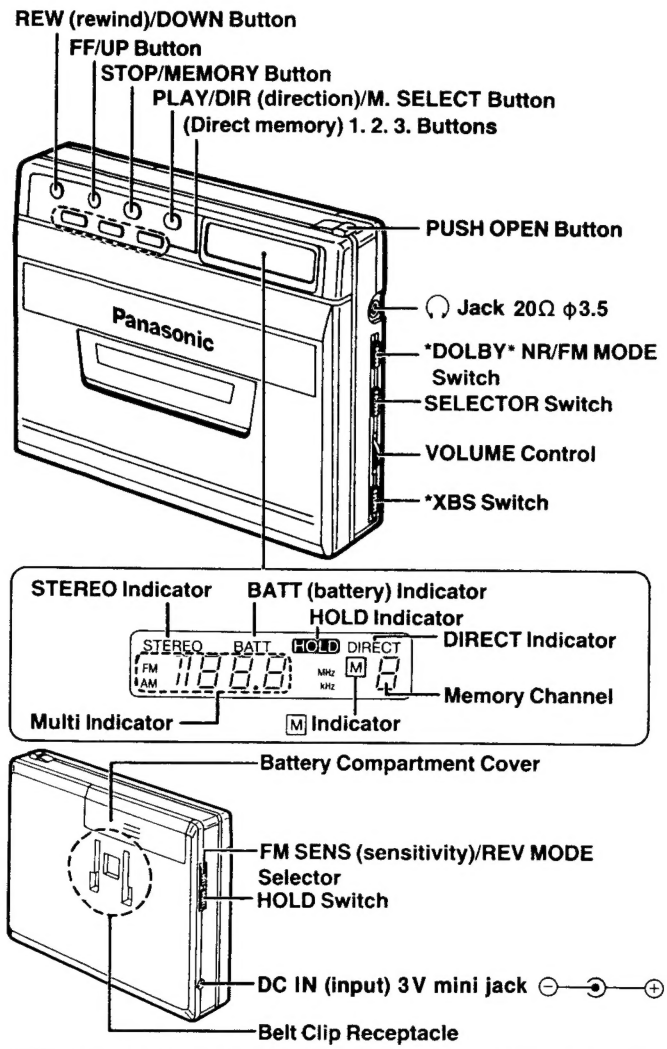
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

■ CONTENTS

■ LOCATION OF CONTROLS

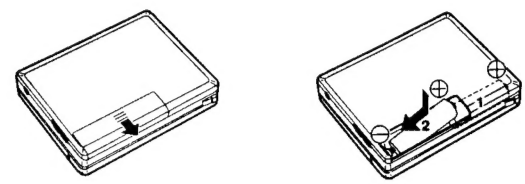


*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Power Source

Battery Operation

Install the "AA" size batteries (Panasonic R6/LR6 or equivalent) as shown in the figure.



Notes:

- Batteries installed with incorrect polarities may leak and damage this unit.
- Replace with fresh batteries of the same kind. Observing Polarity.

Battery removal

Press battery "2" toward the ⊖ battery terminal and remove it.

Battery life

When the batteries are weak, the unit will turn the stop/off condition, all the indicators except HOLD Indicator will disappear and the BATT Indicator will flash on and off.
Replace them with new ones as soon as possible.
To keep the memorized contents for radio, the replacement must be done within 30 seconds.

BATTERY SERVICE LIFE

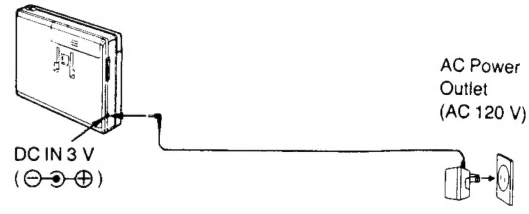
(EIAJ)

	Playback (hour)	Radio (hour)
Panasonic UM-3/R6	3.2	12
LR6 (Panasonic Alkaline)	8.5	27

The above battery service life is measured according to the conditions set forth by EIAJ (Electronic Industries Association of Japan). As the battery service life varies with the method of operation and environmental conditions, use these values as reference.

AC Power Operation

Connect the AC adaptor (Use only Panasonic AC adaptor, RP-AC33, optional) as shown in the figure.



Radio Reception

1. **Release the hold condition.**
2. **Set the SELECTOR Switch to "AM" or "FM".**
   - The BATT Indicator and the frequency display will appear.
3. **Press the UP or DOWN Button to tune in your favorite station.**

   Manual Tuning ..... Pressing either of the UP or DOWN Buttons one by one makes the frequency display change.
   (AM step by 10 kHz, FM Step by 0.1 MHz)
   Repeat the pressing until the frequency of the desired station appears.

   Auto Search Tuning ..... To automatically tune stations, press the UP or DOWN Button for more than 0.5 seconds. The unit will begin to search up or down from the currently displayed frequency. When a station is located, the frequency is held for two (2) seconds and then the unit will continue to search for the next broadcast. When the desired station has been found, press the UP or DOWN Button again and the search function will be stopped.
   Note:
   It may be necessary to use the Manual Tuning procedure to "fine tune" a station that has been located using the Auto Search feature.
4. **Adjust the volume using the VOLUME Control.**

To turn off the radio, set the SELECTOR Switch to "TAPE/OFF".

Antenna

FM: The stereo headphones' cord works as an antenna. Use it extended not coiled.

AM: The Built-in ferrite core AM antenna is somewhat directional. It may be necessary to turn the unit to obtain the good receiving condition.

To memorize into memory channels from 1 to 6

1. **Receive the station to be memorized.**
2. **Press the MEMORY Button.**
   - The M Indicator will flash on and off for 10 seconds.
3. **During flashing (for 10 seconds), press the M. SELECT Button to select the memory channel (1–6) to be memorized.**
   - The Memory Channel Number will appear and each time the M. SELECT Button is pressed, the Memory Channel Number will change from 1 to 6 and return.
4. **Press the MEMORY Button to enter the memory.**
   - The three beeps will be emitted.
   - The M Indicator will light.

Note:
The previous memory will be cleared when the new memory is entered into the same memory channel.

How to tune in the memorized station

Direct tuning using the 1, 2 or 3 Button

1. **Set the SELECTOR Switch to your desired band ("AM" or "FM").**
2. **Release the hold condition.**
3. **Press one of the 1, 2 and 3 Buttons to receive your desired station.**

Memory channel tuning

1. **Set the SELECTOR Switch to your desired band ("AM" or "FM").**
2. **Release the hold condition.**
3. **Press the M. SELECT Button until the desired memory channel number appears.**

Last One Memory

This memory is used during radio-off. When the radio is turned on, the frequency received before it was turned off is tuned in again.

How to clear the unnecessary memory channels

You can clear the unnecessary memory channels for your convenience. (EX. 1→2→3→4→5→6)
cleared

1. **Recall the unnecessary memory channel on the display.**
2. **Press the MEMORY Button.**
   - The M Indicator will flash on and off for 10 seconds.
3. **During flashing, press both of the UP and DOWN Buttons at one time for more than one second.**
   - The frequency display will disappear.
   - The "--.-" will appear.
4. **Press the MEMORY Button.**
   - The three beeps will be heard.
   - The M Indicator will disappear.

Notes:
- The "--.-" display can not be memorized into the 1, 2 or 3 Button. If you press the one of the 1, 2 and 3 Buttons after the "--.-" is displayed, the five beeps will be emitted.
- The cleared channels can be reset to a new station by preforming the memorization procedure above.

FM MODE Selector

To receive FM stereo broadcasts, set the FM MODE Selector to "ST". If reception is poor (excessive noise), set to "MONO". This will reduce the noise and provide clear reception; however, the broadcast will not be heard in stereo.
- When receiving the FM stereo broadcasts, the STEREO Indicator will appear.

Note:
When an AM broadcast is received, to reduce the unwanted beat signals, set the FM MODE Selector to whichever (I or II) position best reduces these "beat" signals. The "beat" signals normally sound like a whistle.

FM SENS (sensitivity) Selector

This is helpful for receiving FM broadcast clearly.
Normally set this selector to "DX".
When the FM reception is impaired or there is interference from a powerful station, set to "LOCAL".
This does not function for AM reception.

How to memorize the broadcasting station

9 stations (including 3 direct-tuning stations) can be memorized for each band.

To memorize into 1, 2, 3 Buttons (for direct tuning)

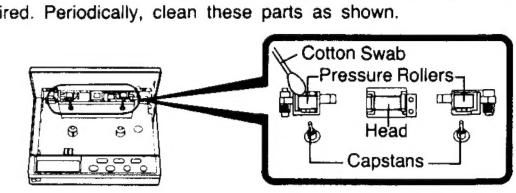
1. **Receive the station to be memorized.**
2. **Press the MEMORY Button.**
   - The M Indicator will flash on and off for 10 seconds.
3. **During flashing (for 10 seconds), press one of the 1, 2 and 3 Buttons to be memorized.**
   - The three beeps will be emitted.
   - The DIRECT Indicator and Memory Channel Number will appear.
   - The M Indicator will light.

Another method

1. Press one of the 1, 2 and 3 Buttons.
2. Press the MEMORY Button.
3. Tune in your desired station.
4. Press the MEMORY Button.

Maintenance

The head assembly, Capstans, and Pressure rollers are in constant contact with the tape. If these parts are dirty, the sound quality will be impaired. Periodically, clean these parts as shown.



Notes:
- If the head assembly is extremely dirty, clean it with a soft cloth dampened with a little alcohol.
- The use of cleaning tapes is not recommended, as some are abrasive and may cause premature wear of the heads. Simply, clean the head assembly as described.
- Do not clean the plastic cabinet with benzine or thinner. Clean it with a cloth, dampened in a mild solution of soap and water. Avoid excessive moisture.
- Avoid spray-type insecticides. Some insecticides contain chemicals that could cause cabinet deformation.

■ PROCEDURE FOR THE REPLACEMENT OF THE MECHANISM BLOCK

•How to replace the mechanism block

The mechanism block is supplied without other parts as a semi-assembly. The head block, motor, belt and plunger are supplied separately from the mechanism block.
If the mechanism block is exchanged as a replacement assembly, follow the preparation procedure below.

Preparation procedure

Remove the head block, motor, belt and plunger from the mechanism to be replaced and replace those parts to the new mechanism block.
(Refer to the "PROCEDURES FOR DISASSEMBLY OF THE MAIN PARTS ON THE MECHANISM".)

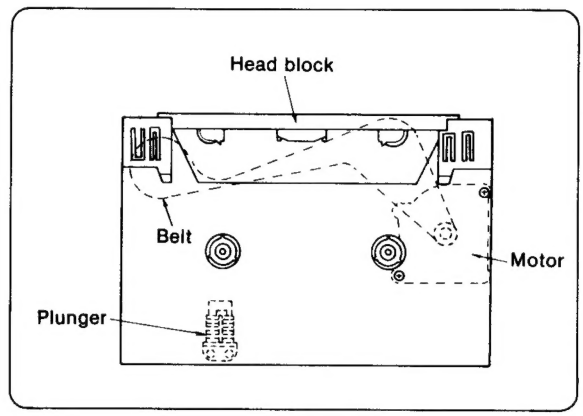


Fig. 1

※ The adjustment of the mechanism block is unnecessary after replacement.

•How to replace the head block

The head and pinch roller are supplied together in the head block. The pinch roller is also supplied separately.

Preparation procedure

The head block for replacement is not supplied with a holder as shown in the figure below. Therefore, remove the holder from the block to be repaired and mount it to the new head block. Then, proceed to replace the head block.
(Refer to "PROCEDURES FOR DISASSEMBLY OF THE MAIN PARTS ON THE MECHANISM".)

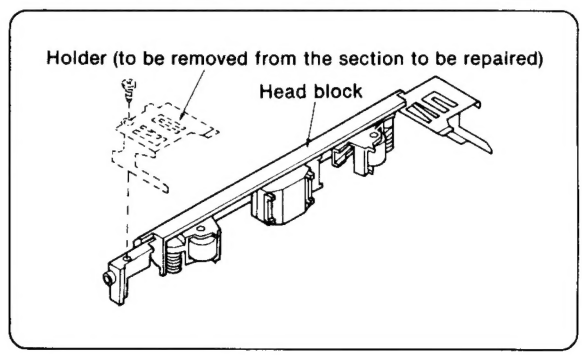


Fig. 2

※ Head azimuth adjustment is unnecessary.

■ PROCEDURES FOR DISASSEMBLY OF THE MAIN PARTS ON THE MECHANISM

•How to remove the mechanism

Follow the procedures in Ref. Nos. 1~8 in the Disassembly Instructions. (See pages 6~8.)
＊After replacing the parts, refer to the notes for assembly. (See page 8.)

•How to remove the head block and pinch roller

1. Follow the procedures in Ref. Nos. 1, 2 and 8 in the Disassembly Instructions, remove the rear cabinet and cassette compartment lid. (See pages 6, 8.)
2. Remove 6 solders (Head FPC). (See Fig. 3.)
3. Remove 2 screws (❶, ❷) in order to remove the head block. (See Fig. 4.)
4. Remove 2 washers. (See Fig. 5.)
5. Remove 2 springs in order to remove the pinch roller. (See Fig. 6.)

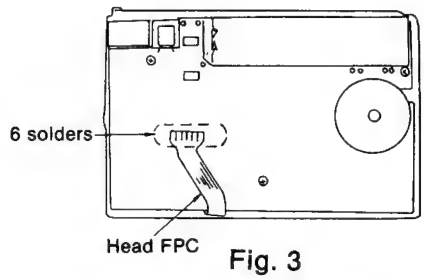


Fig. 3

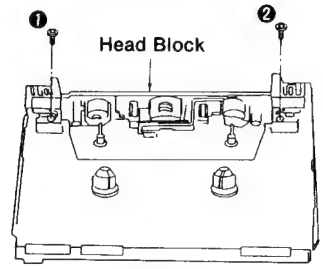


Fig. 4

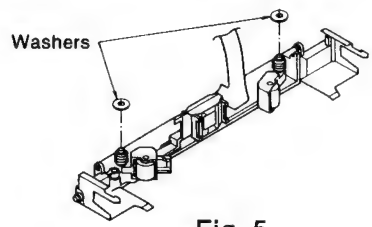


Fig. 5

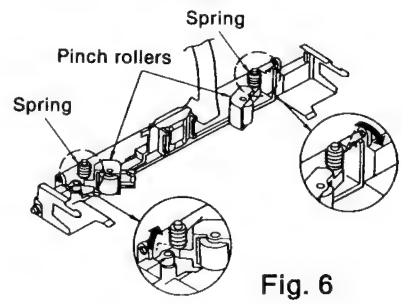


Fig. 6

•How to remove the plunger

1. Follow the procedures in Ref. Nos. 1~4 in the Disassembly Instructions. (See pages 6, 7.)
2. Remove one screw (❶). (See Fig. 7.)
3. Remove the washer and lever in order to remove the plunger. (See Fig. 8.)

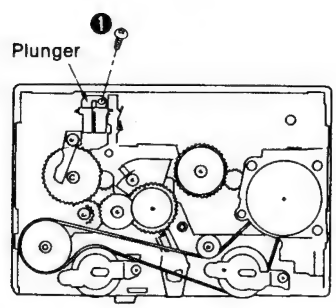


Fig. 7

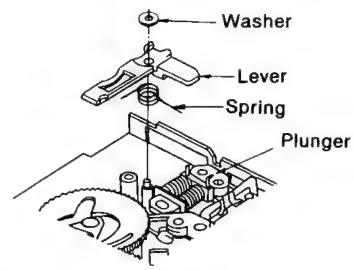


Fig. 8

•How to remove the motor and belt

1. Follow the procedures in Ref. Nos. 1~4 in the Disassembly Instructions. (See pages 6, 7.)
2. Remove the washer and motor wheel to remove the belt from the motor pulley. (See Fig. 9.)
3. Remove 2 screws (❶, ❷) in order to remove the motor. (See Fig. 10.)
4. Remove 2 screws (❸, ❹) and then the attachment plate to remove the belt. (See Fig. 11.)

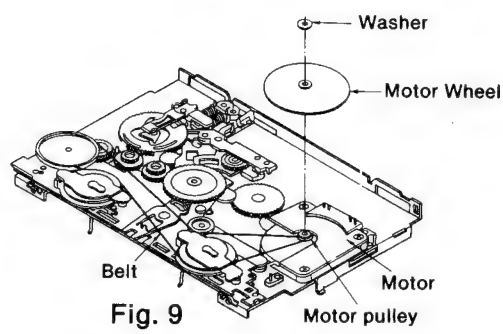


Fig. 9

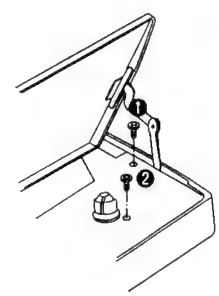


Fig. 10

•How to attach the belt

1. Attach the belt as shown in the figure. (See Fig. 12.)
2. Mount the attachment plate and secure it with 2 screws. (See Fig. 12.)

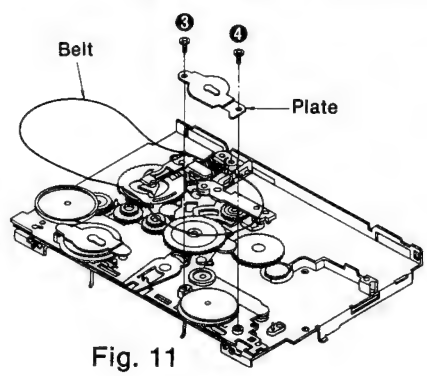


Fig. 11

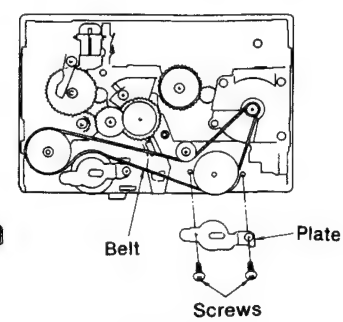
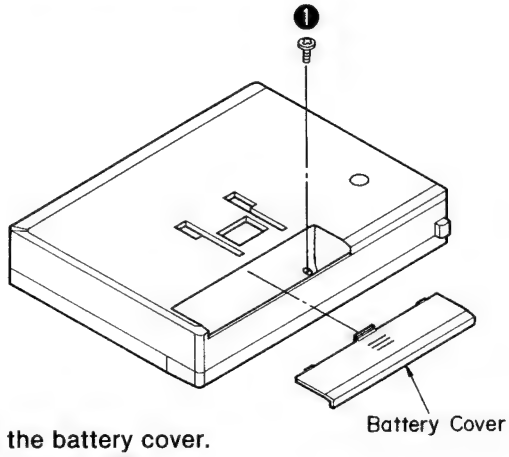


Fig. 12

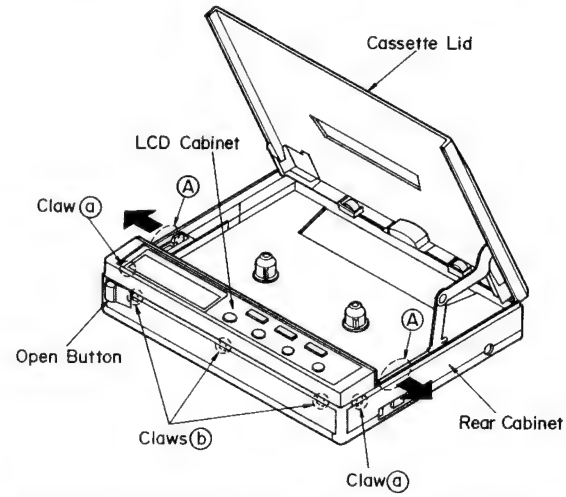
■ DISASSEMBLY INSTRUCTIONS

THIS UNIT CONTAINS F.P.C. BE CAREFUL NOT TO CUT OR DAMAGE THE FOIL DURING DISASSEMBLY.

Ref. No. 1	Removal of the LCD cabinet
Procedure 1	

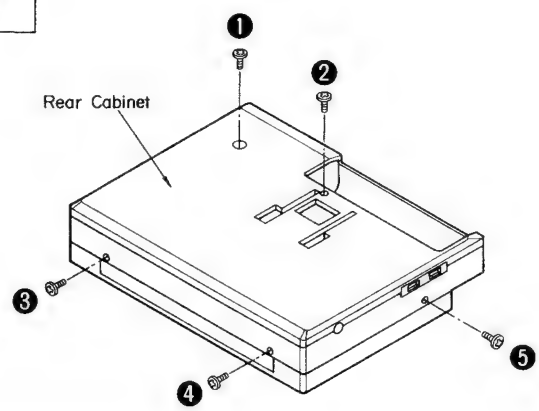


1. Remove the battery cover.
2. Remove 1 screw (❶).

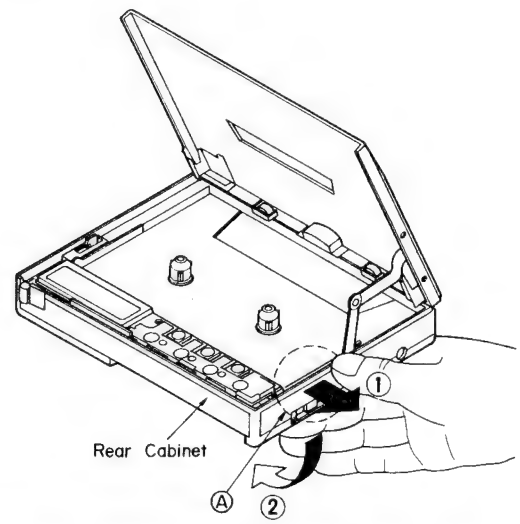


3. Press the open button to open the cassette lid.
4. After pushing section Ⓐ on the rear cabinet slightly, remove claw ⓐ and then claw ⓑ.

Ref. No. 2	Removal of the rear cabinet
Procedure 1→2	

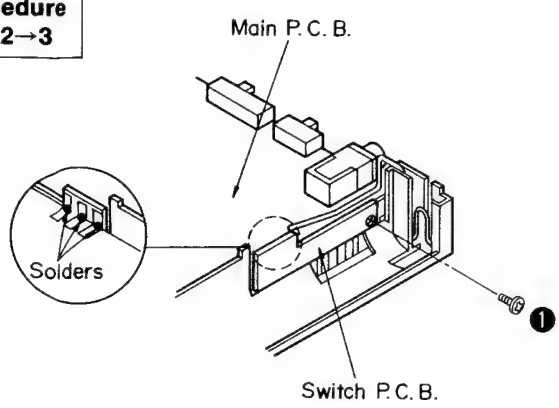


1. Remove 5 screws (❶~❺).

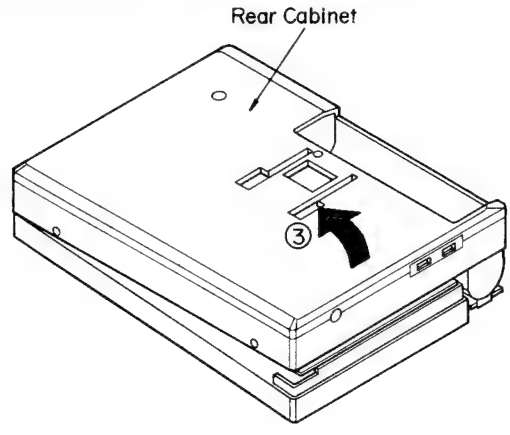


2. Pull the section Ⓐ on the rear cabinet in the direction of arrow ① and then remove it in the direction of arrow ②. (※Pull it so that the switches and controls are disengaged.)

Ref. No. 3	Removal of the switch P.C.B.
Procedure 1→2→3	



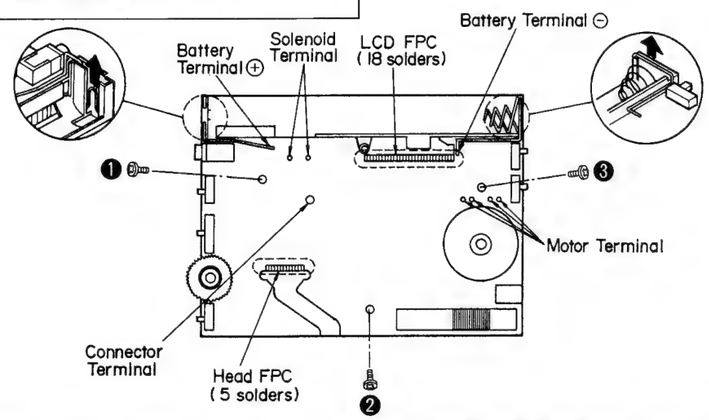
1. Remove 1 screw (❶).
2. Unsolder the 3 points on the connection terminal between the main P.C.B. and Switch P.C.B.



3. Remove the rear cabinet in the direction of arrow ③.

Ref. No. 4 — Removal of the main P.C.B.

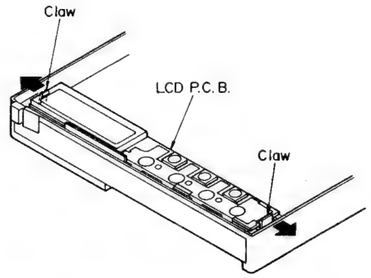
Procedure 1→2→3→4



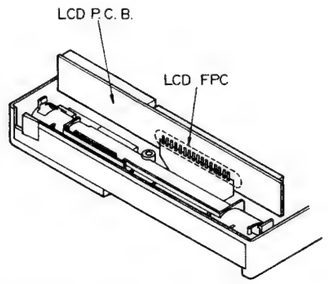
1. Remove 18 solders on the LCD FPC.
2. Remove 5 solders on the head FPC.
3. Remove one solder on the teminal.
4. Remove 2 solders on the solenoid terminal.
5. Remove 4 solders on the motor terminal.
6. Remove the soldered point on the battery ⊕ terminal and then remove the battery terminal in the direction of the arrow.
7. Remove the soldered point on the battery ⊖ terminal and then remove the battery terminal in the direction of the arrow.
8. Remove 3 screws (❶~❸).

Ref. No. 5 — Removal of the LCD P.C.B.

Procedure 1→5



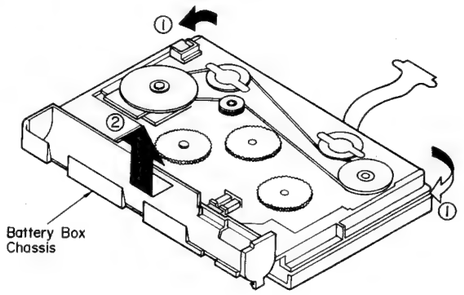
1. Release 2 claws in the direction of arrows.



2. Remove 18 solders on the LCD FPC.

Ref. No. 6 — Removal of the battery box chassis

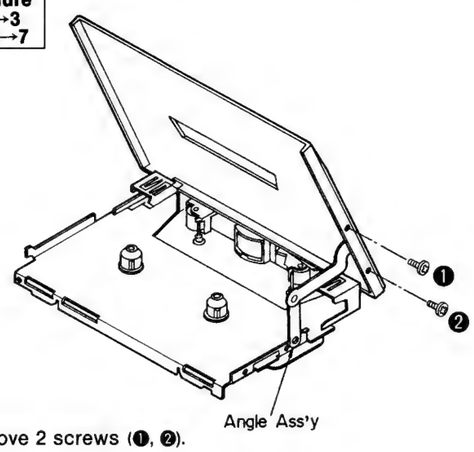
Procedure 1→2→3 →4→6



- Push the chassis in the direction of arrow ① and remove it in the direction of arrow ②.

Ref. No. 7 — Removal of the angle ass'y

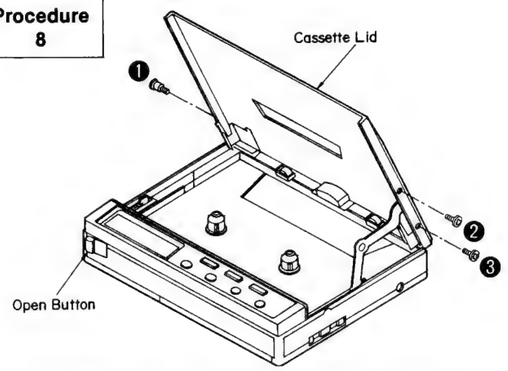
Procedure 1→2→3 →4→6→7



- Remove 2 screws (❶, ❷).

Ref. No. 8 — Removal of the cassette lid

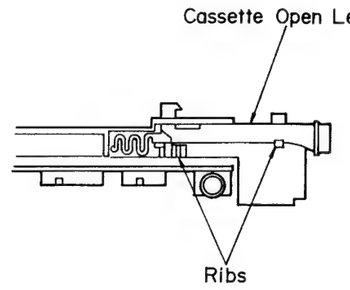
Procedure 8



1. Press the open button to open the cassette lid.
2. Remove 3 screws (❶~❸) and then remove the cassette lid.

Ref. No. 9 — Removal of the cassette open lever

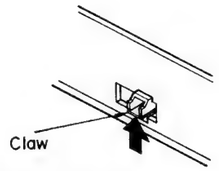
Procedure 1→2→9



- Remove the cassette open lever from the 2 ribs.

Ref. No. 10 — Removal of the DOLBY NR/FM MODE knob, SELECTOR knob, XBS knob

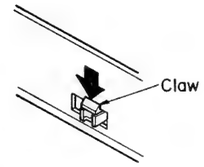
Procedure 1→2→10



- Release the claw in the direction of arrow.

Ref. No. 11 — Removal of the FM SENS/REV MODE knob, HOLD knob

Procedure 1→2→11

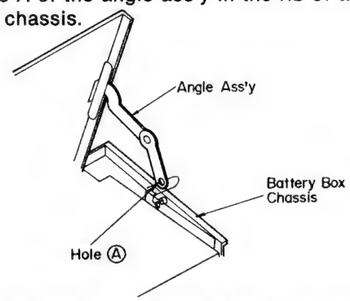


- Release the claw in the direction of arrow.

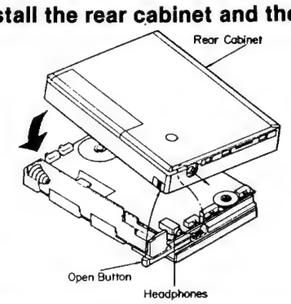
Notes for assembly

■ How to install the battery box chassis

- Engage hole A of the angle ass'y in the rib of the battery box chassis.



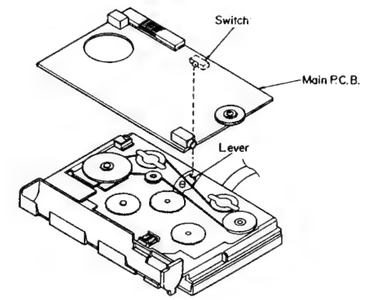
■ How to install the rear cabinet and the slide controls

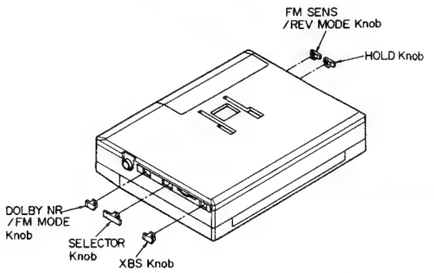


- Engage the rear cabinet with the headphone jack and open button and then install it in the direction of the arrow as shown in the figure above.

■ How to install the main P.C.B.

- Engage the switch in the lever of the mechanism.





- Install the slide controls so that the switch bosses are engaged with the slide controls.

■ HOW TO CHECK OPERATIONS DURING DISASSEMBLY AND SERVICING

Check operations during disassembly following the steps.

1) Set the condition as shown in Fig. 1 in accordance with Ref. Nos. 1, 2, 4 and 5 on pages 6 and 7 of the Disassembly Instructions. (DO NOT remove the solders on the head and LCD FPCs.)
2) Connect the PCB and motor with the extension cord (RFKZ0002).
3) Solder the following transistors and IC terminal with a lead wire and then short-circuit them.
   - Short-circuit between Q508 base and the ground.
   - Short-circuit between Q353 collector and emitter.
   - Short-circuit between IC5 ⑧ pin and Q303 emitter.

   Note: See pages 9 and 10 for the points to be short circuited.
4) Connect the AC adaptor to DC in jack (See Fig. 1)
5) Connect the ground terminal foil and the mechanism ground pin with a lead wire (mechanism earth).
6) Manually operate the plunger when checking the PLAY/STOP operation.
   - Manually pulling the plunger arm once sets the FWD mode; twice, REV; and, three times, STOP.

   Note: • Operate the plunger manually. Even if the operation buttons are pressed, the plunger will not be actuated.
   - Even if the mechanism unit is switched to the REV mode in Step 6, the head change-over switch (IC3) will remain in the FWD position, so set the FWD mode to check the audio.

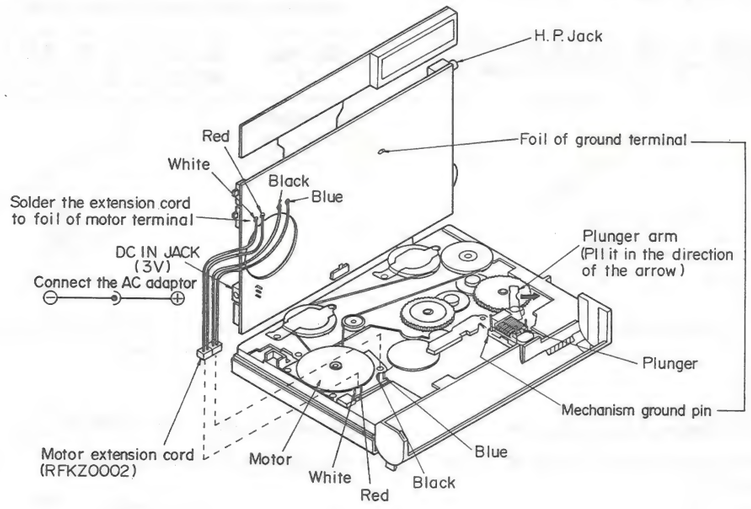
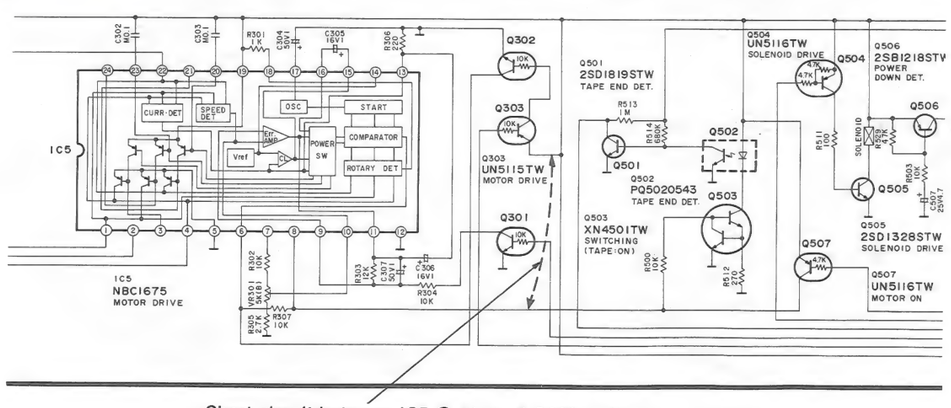


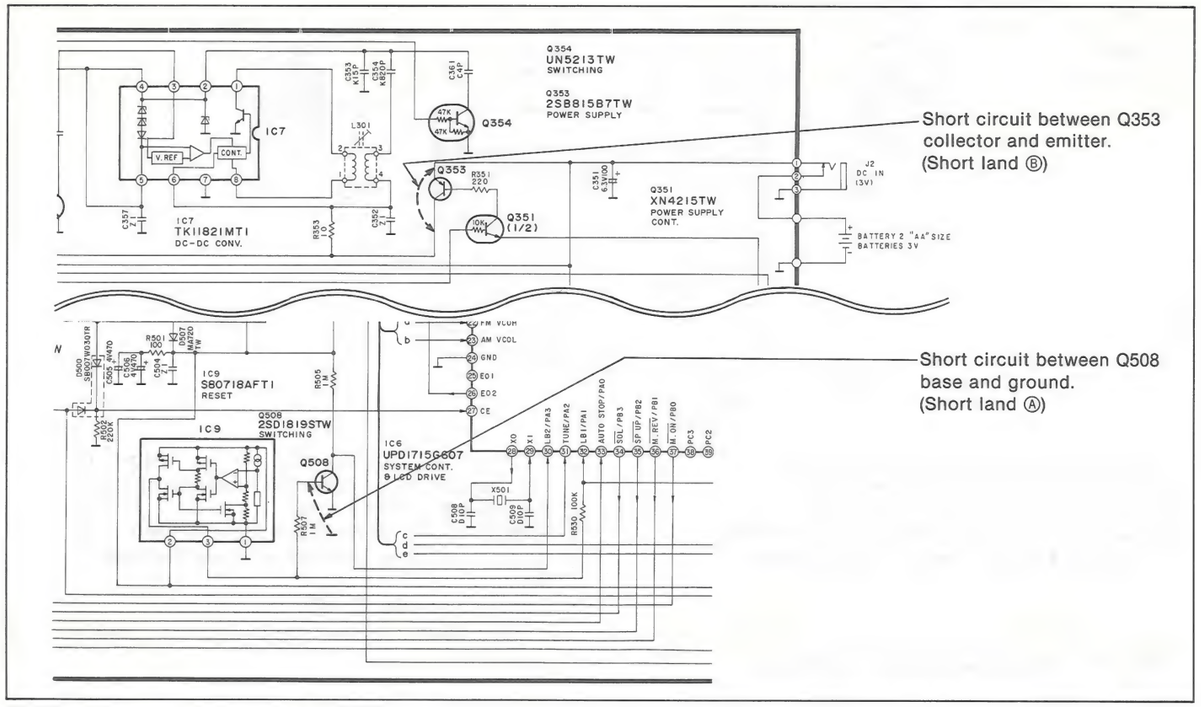
Fig. 1

• Short circuit point

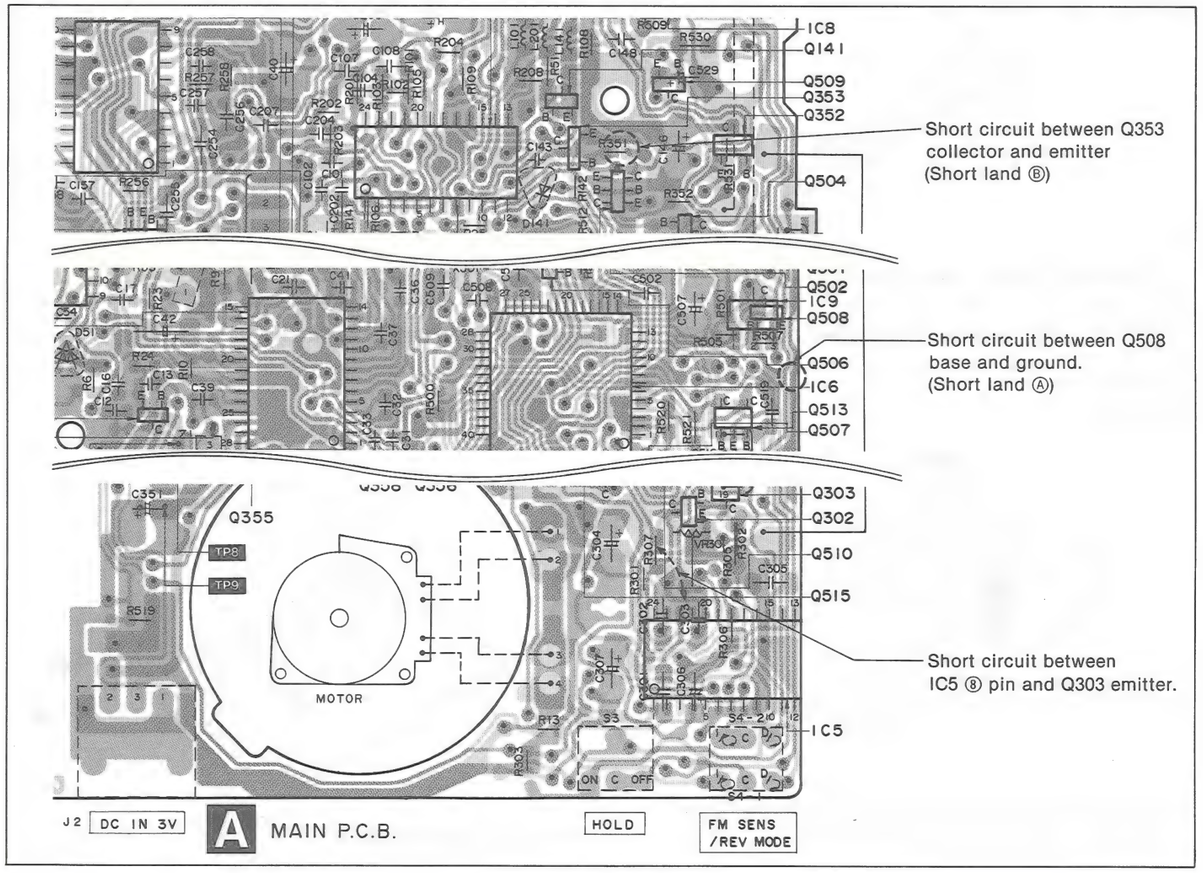
(1) SCHEMATIC DIAGRAM



(2) SCHEMATIC DIAGRAM



(1) PRINTED CIRCUIT BOARD



MEASUREMENTS AND ADJUSTMENTS

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set volume control to maximum. 2. Set band/reverse mode switch to FM ST, FM and AM. 3. Set function selector switch to radio or tape. 4. Set power source voltage to 3.0V DC. 5. Set Dolby NR switch to OUT.	6. Set Tape Selector Switch to normal. 7. Set XBS switch to OFF. 8. Output of signal generator should not be higher than necessary to obtain an output reading.

• AM ADJUSTMENT

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT POINT	REMARKS
	CONNECTIONS	FREQUENCY				
AM-RF ADJUSTMENT						
AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	600kHz	Tune to signal.	Headphones jack (20Ω) (Refer to Fig. 1)	(*1) L2 (AM ANT Coil)	Adjust for maximum output. Adjust L2 by moving coil bobbin along ferrite core.
AM		1,500kHz			CT1 (AM ANT Trimmer)	Adjust for maximum output.
(*1) Cement antenna bobbin with wax after completing alignment.						

• FM ADJUSTMENT

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT POINT	REMARKS
	CONNECTIONS	FREQUENCY				
FM-RF ADJUSTMENT						
FM	Connect to test point TP3 through FM dummy antenna. Negative side to test point TP4.	106MHz	Variable capacitor fully open.	Headphones jack (20Ω) (Refer to Fig. 1)	CT2 (FM OSC Trimmer)	(*2) Adjust for maximum output.
FM VCO ADJUSTMENT						
FM	——	——	108MHz	TP8...(+) TP9...(−)	CT3	Adjust CT3 for 9.0V±0.4V reading on DC digital voltmeter.
FM MPX ADJUSTMENT						
FM	Connect to test point TP3 through FM dummy antenna. Negative side to TP4.	98MHz, 60dB (CW)	98MHz	TP1...(+) TP2...(−)	VR1	• Set FM Mode/SENS. Switch to ST/LOCAL. • Adjust VR1 for 19kHz±50Hz reading on frequency counter.
(*2) Three output responses will be present; proper tuning is the center frequency.						

• TAPE DECK ADJUSTMENT

ITEM	TEST TAPE	MEASUREMENT POINT	ADJUSTMENT POINT	PROCEDURE
Tape speed	QZZCWAT (3kHz, −10dB)	Headphones jack (20Ω) (Refer to Fig. 1)	VR301 (Refer to Fig. 2)	Playback the central part of the tape and adjust VR301 so that the tape speed is as follows. Forward: 2,940±10Hz Reverse: 3,000±80Hz

Note: The playback head is supplied on the head arm assembly. (See the Mechanism parts location on page 23.)
The assembly requires no adjustment.

• ADJUSTMENT POINT

* Please refer to the Printed Circuit Board and Wiring connection Diagram for test point locations.

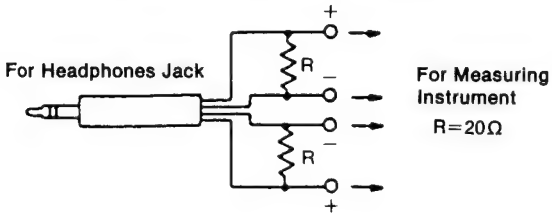


Fig. 1

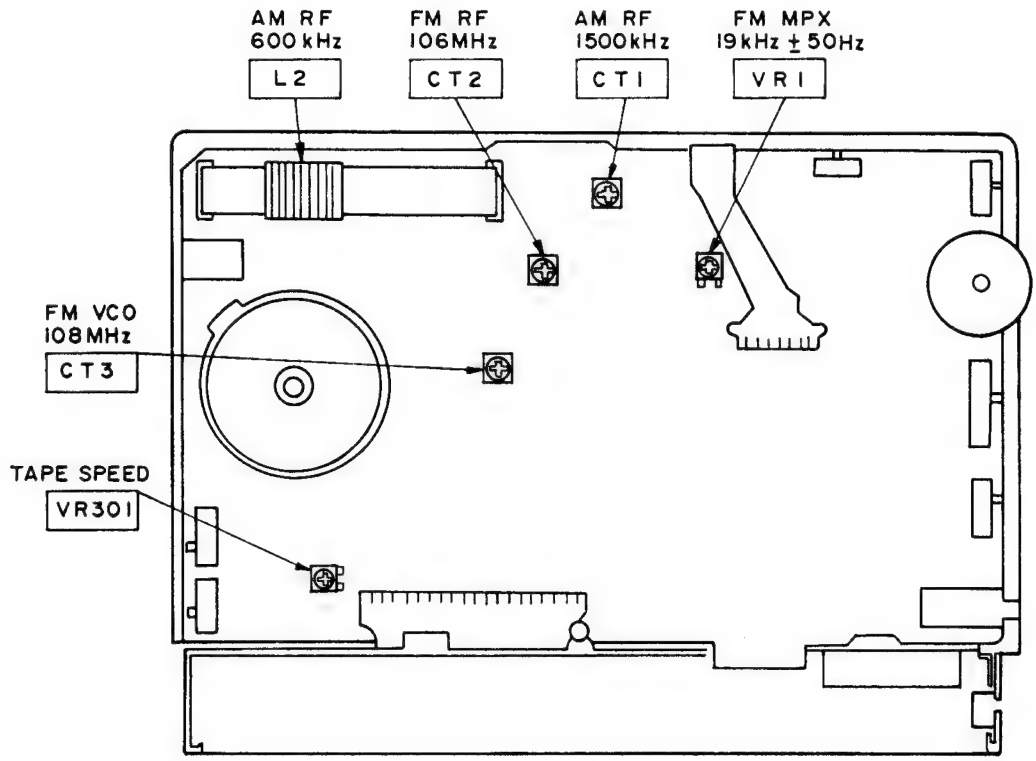
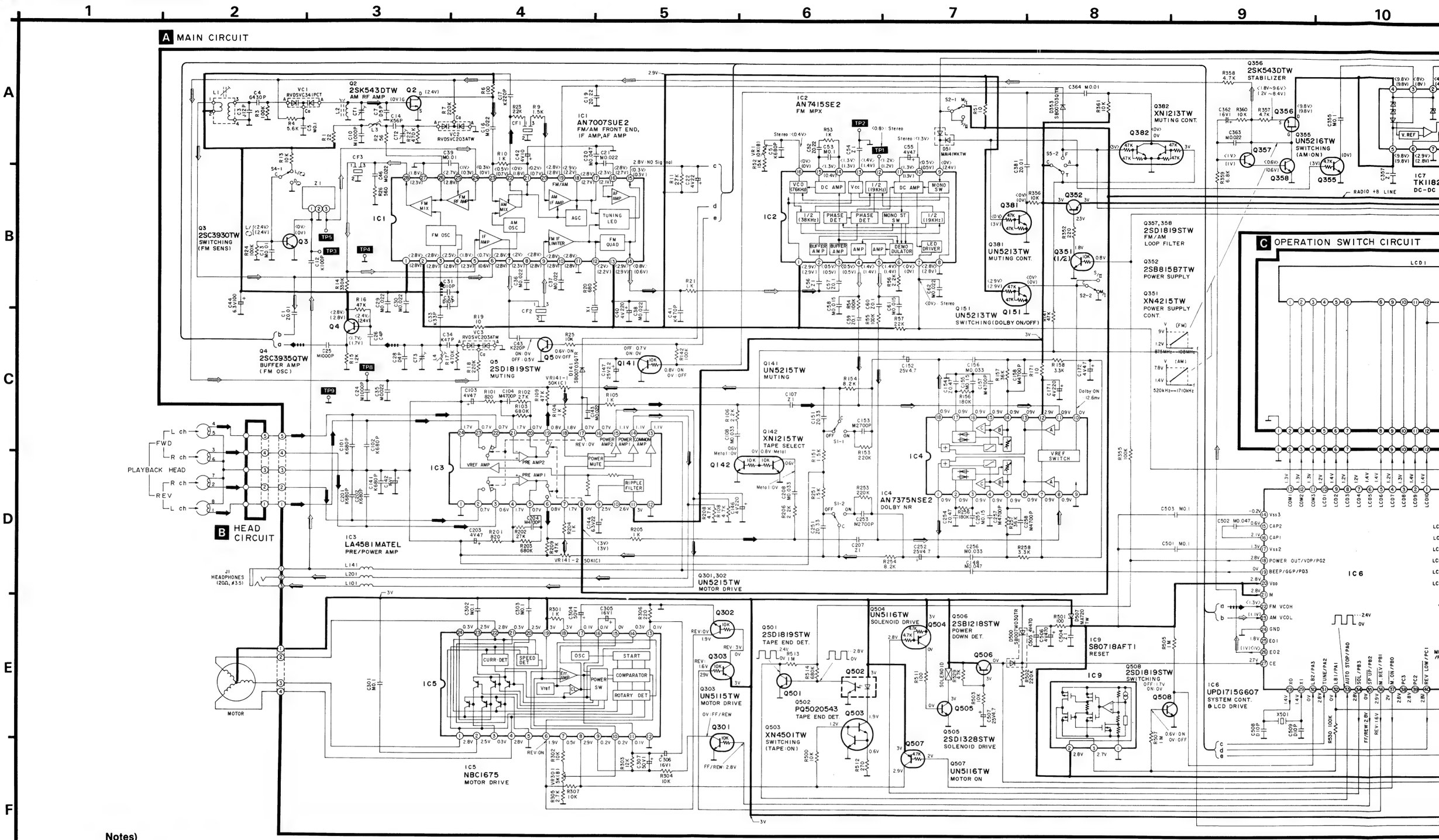


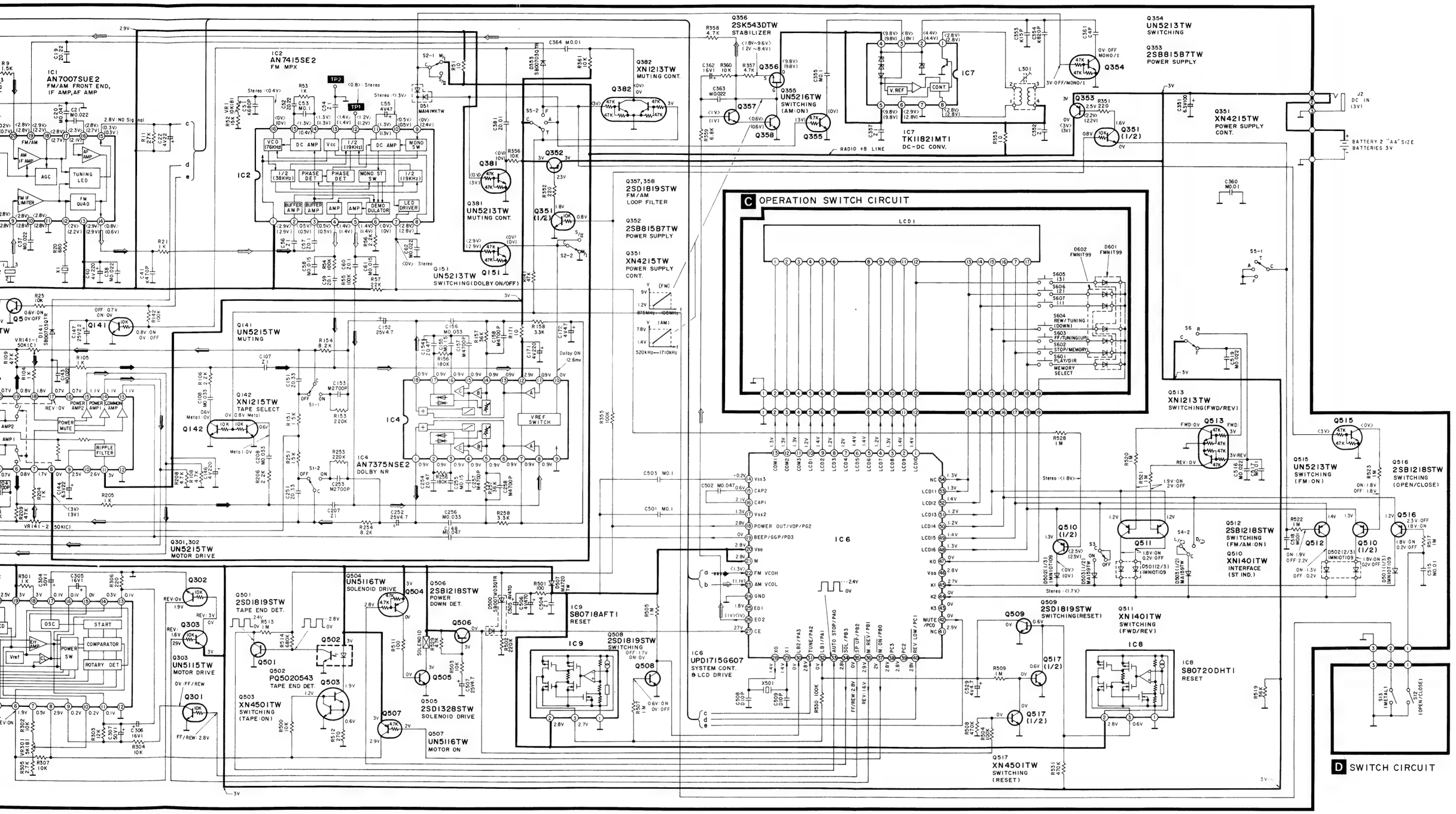
Fig. 2

SCHEMATIC DIAGRAM



Notes)

- S1: XBS switch in "OFF" position.
- S2: Dolby NR/FM mode switch in "M/I" position. (S/II...ON/ST/II, M/I...OFF/MONO/I)
- S3: Hold switch in "OFF" position.
- S4: FM sens (sensitivity)/REV mode switch in "L/⊂⊃" position. (L/⊂⊃...LOCAL/⊂⊃, D/⊃ ...DX/⊃)
- S5: Selector switch in "TAPE" position. (F...FM, A...AM, T...TAPE)
- S6: FWD/REV. switch in "FWD" position. (F...FWD, R...REV)
- S12: Leaf switch (open/close).
- S13: Leaf switch (Metal) in "OFF" position.
- S601: Play/direction/M. select switch in "OFF" position.
- S602: Stop/memory switch in "OFF" position.
- S603: FF/UP switch in "OFF" position.
- S604: Rewind/down switch in "OFF" position.
- S605~607: Direct memory switches. [S605 : 3, S606 : 2, S607 : 1]
- VR1: FM MPX adjustment VR.
- VR141: Volume control VR.
- VR301: Tape speed adjustment VR.
- DC voltage measurements are taken with electronics voltmeter from negative terminal of battery. < >...FM, ( )...AM, No mark...Playback
- Bat
- 74
- 60



tor switch in "TAPE" position.
M, A...AM, T...TAPE)
REV. switch in "FWD" position.
WD, R...REV)
switch (open/close).
switch (Metal) in "OFF" position.

- S601: Play/direction/M. select switch in "OFF" position.
- S602: Stop/memory switch in "OFF" position.
- S603: FF/UP switch in "OFF" position.
- S604: Rewind/down switch in "OFF" position.
- S605~607: Direct memory switches. [S605 : 3, S606 : 2, S607 : 1]

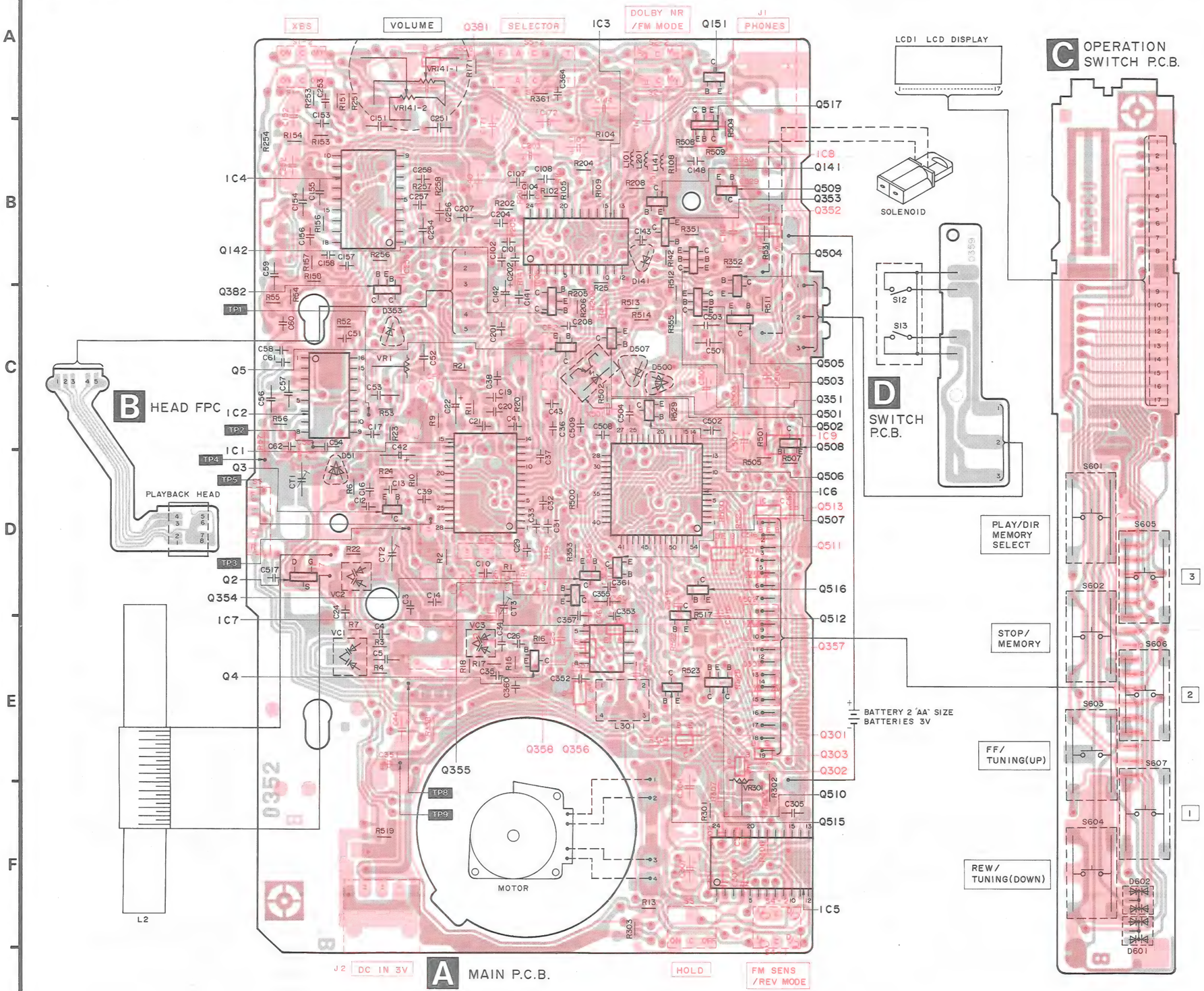
- VR1: FM MPX adjustment VR.
- VR141: Volume control VR.
- VR301: Tape speed adjustment VR.
- DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
  < >...FM, ( )...AM, No mark...Playback

- Battery current:
  No signal: (AM)...47.2mA (VR: MAX)
  (FM)...59.2mA (VR: MAX)
  Tape playback: 140mA (VR: MAX)
- 74dB/m • 30% MOD 54mA (VR max)
- 60dB • 30% MOD 71mA (VR max)

- **This schematic diagram may be modified at any time with the development of new technology.**
- : FM/AM Vcap CONTROL SIGNAL
- : AM SIGNAL
- : PLAYBACK SIGNAL
- : MAIN (TAPE/RADIO) SIGNAL
- : ⊕ B LINE

RQ-V500

PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM



Notes:

This diagram shows a front view of the IC mounting surface.

1. The circuit shown in ( ) on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in ( ) on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols (●) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.
4. —— : Chip resistor
5. —— : Chip jumper (0Ω)

• This circuit board diagram may be modified at any time with the developement of new technology.

TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

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 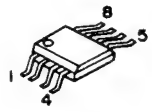 </td>
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 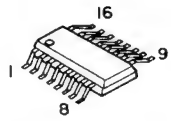 </td>
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 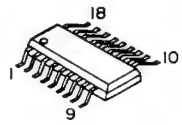 </td>
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 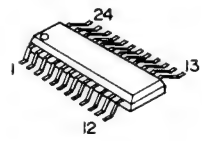 </td>
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 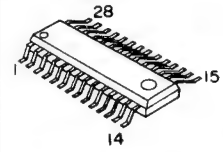 </td>
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 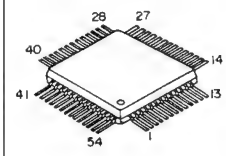 </td>
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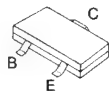
<td>  </td>
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 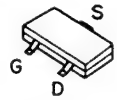 </td>
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 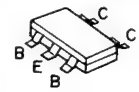 </td>
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 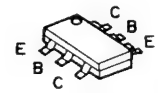 </td>
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 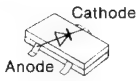 </td>
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 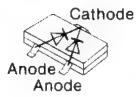 </td>
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 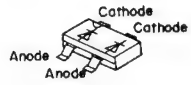 </td>
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 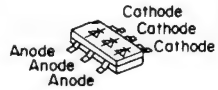 </td>
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 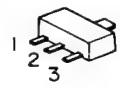 </td>
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 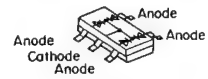 </td>
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 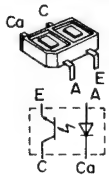 </td>
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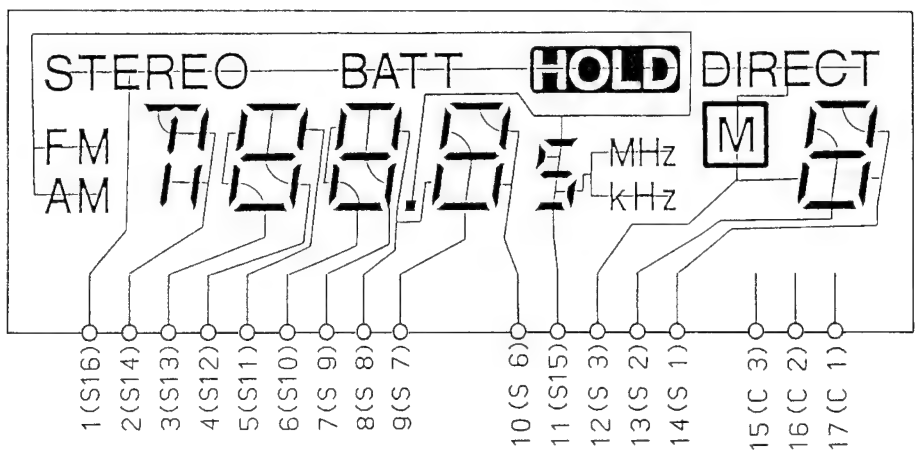
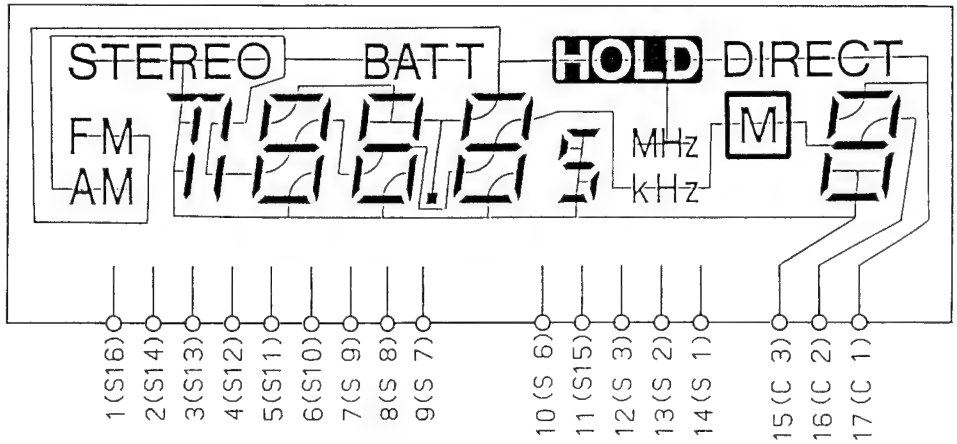
INTERNAL CONNECTIONS OF LCD

- **Common connection diagram**



• **Segment connection diagram**



■ TERMINAL FUNCTIONS OF IC

• **IC6 (UPD1715G607): SYSTEM CONTROL & LCD DRIVE**

Terminal No.	Terminal Name	I/O	Function
1 ⟆ 10	LCD10 ⟆ LCD1	O	Outputs terminals for LCD segment signals.
11 ⟆ 13	COM3 ⟆ COM1	O	Outputs terminals for LCD common signals.
14	$V_{SS}3$	—	Condenser external terminals.
15	CAP2	—	
16	CAP1	—	
17	$V_{SS}2$	—	
18	VDP	O	Outputs the power out terminal.
19	CGP	O	Outputs the buzzer out terminal.
20, 46	V_{DD}	—	Power terminal.
21	M	I	Inputs the prescaler divider ratio select signal.
22	VCOH	I	Inputs the local oscillator (VCO) (10~130 MHz)
23	VCOL	I	Inputs the local oscillator (VCO) (0.5~40 MHz)
24	$V_{SS}1$	—	For ground connection.
25	EO1	O	PLL error output terminal.
26	EO2		
27	CE	I	Device select signal input terminal.

Terminal No.	Terminal Name	I/O	Function
28	XO	O	Terminals used for connecting a quartz oscillator.
29	XI	I	
30 ⟆ 33	PA3 ⟆ PA0	I	Data signal input terminal
34	PB3	O	Outputs the timer out terminal.
35	PB2	O	Band select output terminal.
36	PB1		
37	PB0	O	Muting signal output terminal.
38 ⟆ 40	PC3 ⟆ PC1	O	Key return signal source output terminals for momentary switch on the key matrix.
42	PC0		
41, 54	NC	—	——
43 ⟆ 45	K3 ⟆ K1	I	Terminals for Key return signal input.
47	K0		
48 ⟆ 53	LCD16 ⟆ LCD11	O	Output terminals for LCD segment signals.

■ REPLACEMENT PARTS LIST

Notes : * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	AN7007SUE2	IC, FM/AM IF AMP	
IC2	AN7415SE2	IC, MPX	
IC3	LA4581MATEL	IC, PRE-POWER	
IC4	AN7375NSE2	IC, DOLBY NR	
IC5	NBC1675	IC, MOTOR DRIVE	
IC6	UPD1715G607	IC, MICRO COMPUTER	
IC7	TK11821MT1	IC, DD CONV.	
IC8	S80720DHT1	IC, RESET	
IC9	S80718AFT1	IC, RESET	
		TRANSISTOR(S)	
Q2	2SK543DTW	TRANSISTOR	
Q3	2SC3930BTW	TRANSISTOR	
Q4	2SC3935-Q	TRANSISTOR	
Q5	2SD1819STW	TRANSISTOR	
Q141	UN5215-Q	TRANSISTOR	
Q142	XN1215TW	TRANSISTOR	
Q151	UN5213TW	TRANSISTOR	
Q301, 302	UN5215-Q	TRANSISTOR	
Q303	UN5115TW	TRANSISTOR	
Q351	XN4215TW	TRANSISTOR	
Q352, 353	2SB815B7TW	TRANSISTOR	
Q354	UN5213TW	TRANSISTOR	
Q355	UN5216TW	TRANSISTOR	
Q356	2SK543DTW	TRANSISTOR	
Q357, 358	2SD1819STW	TRANSISTOR	
Q381	UN5213TW	TRANSISTOR	
Q382	XN1213TW	TRANSISTOR	
Q501	2SD1819STW	TRANSISTOR	
Q502	RVSGP2S24BC	TRANSISTOR	
Q503	XN4501TW	TRANSISTOR	
Q504	UN5116TW	TRANSISTOR	
Q505	2SD1328STW	TRANSISTOR	
Q506	2SB1218STW	TRANSISTOR	
Q507	UN5116TW	TRANSISTOR	
Q508, 509	2SD1819STW	TRANSISTOR	
Q510, 511	XN1401TW	TRANSISTOR	
Q512	2SB1218STW	TRANSISTOR	
Q513	XN1213TW	TRANSISTOR	
Q515	UN5213TW	TRANSISTOR	
Q516	2SB1218STW	TRANSISTOR	
Q517	XN4501TW	TRANSISTOR	

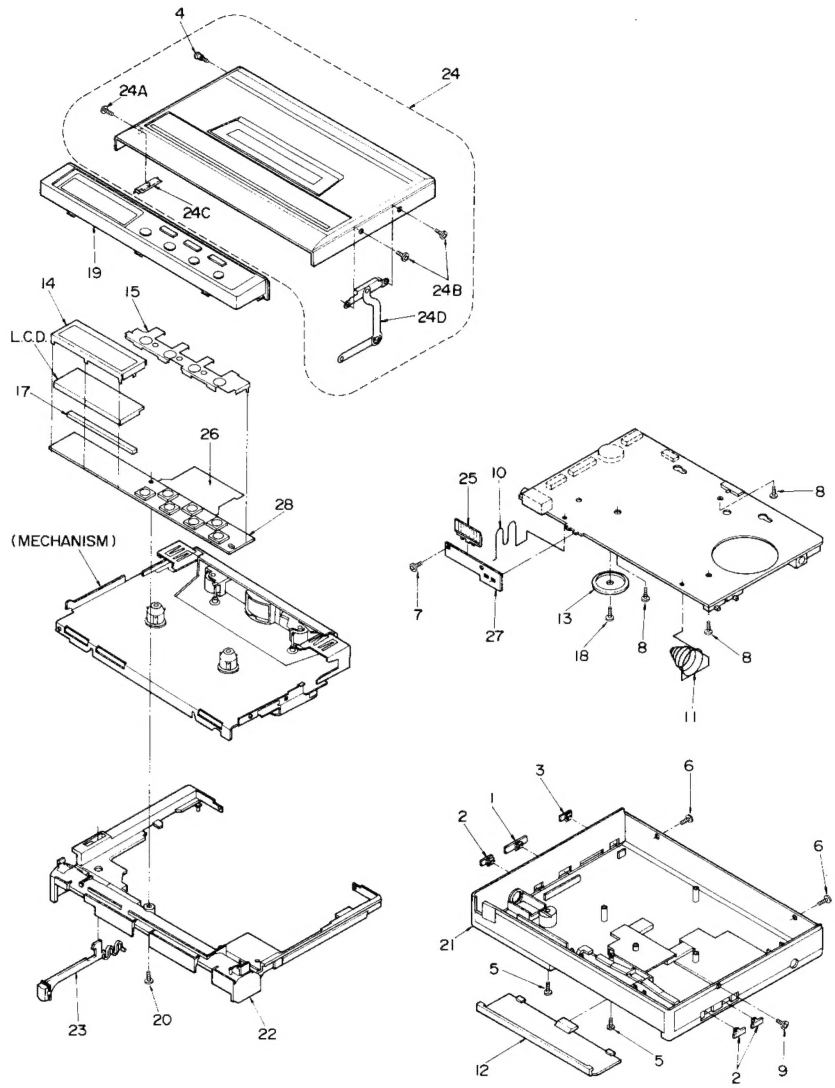
Ref. No.	Part No.	Part Name & Description	Remarks
		DIODE(S)	
D51	MA141WKTW	DIODE	
D141	SB00703QTR	DIODE	
D353	SB00703QTR	DIODE	
D500	SB007W03QTR	DIODE	
D501, 502	IMN10T109	DIODE	
D503	MA159TW	DIODE	
D507	MA720TW	DIODE	
D601, 602	FMN1T99	DIODE	
		VARIABLE RESISTOR(S)	
VR1	RVNEA14B1WF	V. R, FM MPX ADJ.	
VR141	EVUAEAT43C54	V. R, VOLUME	
VR301	RVNEA53B1W-F	V. R, TAPE SPEED ADJ.	
		VARIABLE CAPACITOR(S)	
VC1	RVDSVC341PCT	V. C, AM	
VC2, 3	RVDSVC203ATW	V. C, FM RF & OSC	
		COMPONENT COMBINATION(S)	
Z1	RCRBMT001-H	B. P. F.	
		COIL(S)	
L1	RLO2A006-M	COIL, AM OSC	
L2	RLV2N008-0	COIL, AM ANT	
L3	RL04Y219-0	COIL, FM RF	
L4	RL04Y220-0	COIL, FM OSC	
L101	RLFJFCR47KTD	COIL	
L141	RLFJFCR47KTD	COIL	
L201	RLFJFCR47KTD	COIL	
L301	RL09U009T-T	COIL	
		FILTER(S)	
CF1	RLFFETWLA03D	FILTER, AM	
CF2	RLFFETWLA03D	FILTER, FM	
CF3	RLFAPFB450J	FILTER, FM	
		OSCILLATOR(S)	
X1	RLFDFTA03D	OSCILLATOR	
X501	RSXD75K0S04	OSCILLATOR	

Ref. No.	Part No.	Part Name & Description	Remarks
		TRIMMER(S)	
CT1-3	ECRJA010A11X	AM & FM RF/FM OSC	
		JACK(S)	
J1	RJJD3S5ZA-C	HEADPHONES JACK	
J2	SJJD18	DC IN JACK	
		LCD	
LCD1	RSL5016	L. C. D.	
		SWITCH(ES)	
S1-4	ESD11H220	SW, OPERATION	
S5	ESD11H230	SW, SELECT	
S6	RSS2A002-A	SW, FWD/REV	
S12, 13	RSH1B001-6U	SW, LEAF (OPEN/CLOSE, METAL)	
S601-607	RSP1A009-H	SW, OPERATION KEY	

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RGV0044-K	KNOB, SELECTOR	
2	RGV0045-K	KNOB, DOLBY NR/FM SENS&MODE	
3	RGV0045-R	KNOB, XBS	
4	RHD14008-K	SCREW	
5	RHD14018-K	SCREW	
6	RHE5097ZA	SCREW	
7	RHE5100YA	SCREW	
8	RHE5119ZA	SCREW	
9	RHE5169YA	SCREW	
10	RJC30006	BATTERY TERMINAL (+)	
11	RJC70007	BATTERY TERMINAL (-)	
12	RKK0019-K	BATTERY COVER	
13	RGW0068-K	KNOB, VOLUME	
14	RMN0065	LCD HOLDER	
15	RSC0122	SHIELD PLATE(A)	
17	RSQ0012	CONNECTOR	
18	XSHR17+2FZ	SCREW	
19	RFKGQV500P-K	DISPLAY PANEL ASS'Y	
20	RHD14018-K	SCREW	
21	RFKJQV500P-K	BOTTOM BOARD ASS'Y	
22	RKQ0056-K	BATTERY BOX CHASSIS	
23	RMR0262-K	C. LOCK HOLDER	
24	RYF0060	CASSETTE LID ASS'Y	
24A	RHE5097ZA	SCREW	
24B	RHE5169YA	SCREW	
24C	RMA0284	LOCK ANGLE	
24D	RXM0002	LINK ANGLE ASS'Y	
25	RSH1B001-6U	LEAF SW.	
26	RJB0353	F. P. C.	
27	RJB0359	DET. SW P. C. B.	
28	RJB0352A	PANEL SW P. C. B.	
		MECHANISM PARTS	
101	HPX-24NB3A	MOTOR	
102	XQS14+A18FZ	SCREW	
103	RDV0003	BELT	
106	RXQ0006	HEAD BLOCK ASS'Y	
106A	RNW101ZA	WASHER	
106B	RME0004-1	SPRING	
106C	RME0005	SPRING	
106D	RXL0004	PINCH ROLLER ARM	
106E	RXL0005	PINCH ROLLER ARM	

Ref. No.	Part No.	Part Name & Description	Remarks
107	RMA0023	HOLDER	
108	RHE5147ZA	SCREW	
110	RXY0007	MECHANISM BLOCK	
110A	RMQ0011	ANGLE	
110B	RMQ0012	ANGLE	
110C	RHD14006	SCREW	
110D	RML0033-1	LEVER	
110E	RHR3331ZB	WASHER	
110F	RME0006	SPRING	
111	RJR0053	CONNECTION TERMINAL	
112	XQN14+AM14FN	SCREW	
		PACKING MATERIAL	
P1	RPK0126	GIFT BOX	
P2	RPN0294	PAD	
P3	RPN0312	PAD	
P4	RPQ0024	PROTECTION SHEET	
		ACCESSORIES	
A1	RQT0339-P	INSTRUCTION MANUAL	(P)
A1	RQT0449-C	INSTRUCTION MANUAL	(PC)
A2	RQX9028ZD	SERVICENTER LIST	
A3	RGQ0038-K	BELT CLIP	
A4	RP-HT106PY	HEADPHONES	

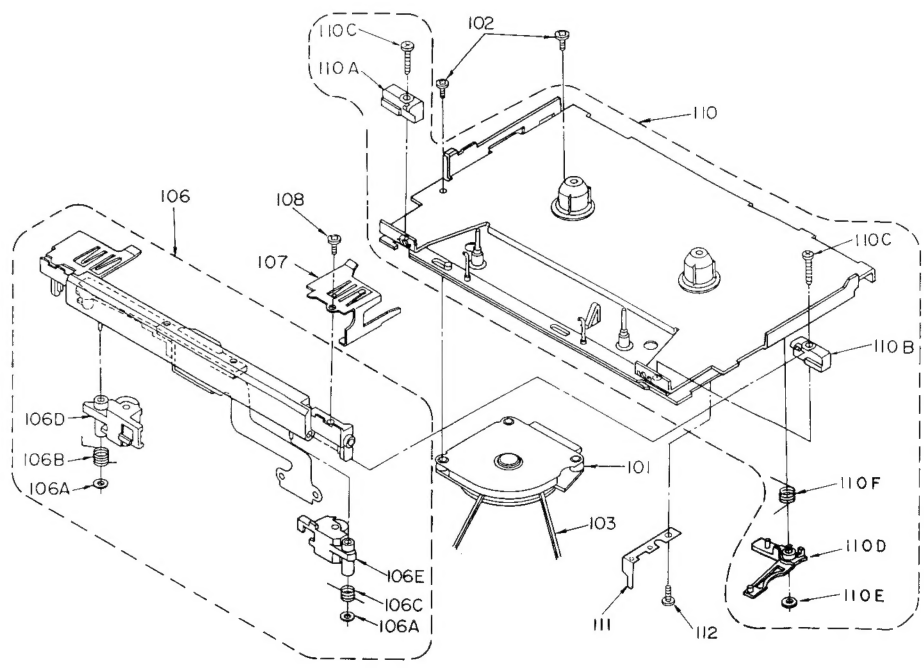
■ CABINET PARTS LOCATION



■ MECHANISM PARTS LOCATION

	FWD & REV mode
Wow and flutter	0.25% (WRMS)
Pressure of pinch roller	120±20g
Take-up tension	More than 60g
Playback torque	20^{+10}_{-5} g•cm
FF/REW torque	More than 60g•cm

The parts enclosed in the dotted boxes are supplied as a block assembly. Therefore, they are not supplied separately.



■ RESISTORS & CAPACITORS

Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R1	ERJ3GEYJ220V	1/16W 22
R2	ERJ3GEYJ560V	3W 56
R3	ERJ3GEYJ104V	1/16W 100K
R4	ERJ3GEYJ562V	1/16W 5.6K
R6	ERJ3GEYJ101V	1/16W 100
R7	ERJ3GEYJ224V	1/16W 220K
R9	ERJ3GEYJ152V	3W 1.5K
R10	ERJ3GEYJ102V	1/16W 1K
R11	ERJ3GEYJ273V	1/16W 27K
R13	ERJ3GEYJ103V	1/16W 10K
R14	ERJ3GEYJ334V	1/16W 330K
R15	ERJ3GEYJ122V	3W 1.2K
R16	ERJ3GEYJ473V	1/16W 47K
R17	ERJ3GEYJ474V	1/16W 470K
R18	ERJ3GEYJ224V	1/16W 220K
R19	ERJ3GEYJ100V	1/16W 10
R20	ERJ3GEYJ681V	3W 680
R21	ERJ3GEYJ102V	1/16W 1K
R22	ERJ3GEYJ474V	1/16W 470K
R23	ERJ3GEYJ222V	1/16W 2.2K
R24	ERJ3GEYJ104V	1/16W 100K
R25	ERJ3GEYJ103V	1/16W 10K
R26	ERJ6GEYJ561V	1/10W 560
R51	ERJ6GEYJ100V	1/10W 10
R52	ERJ3GEYJ153V	1/16W 15K
R53	ERJ3GEYJ102V	1/16W 1K
R54, 55	ERJ3GEYJ104V	1/16W 100K
R56	ERJ3GEYJ222V	1/16W 2.2K
R57	ERJ6GEYJ223V	1/10W 22K
R101	ERJ6GEYJ821V	1/10W 820
R102	ERJ3GEYJ273V	1/16W 27K
R103	ERJ6GEYJ684V	1/10W 680K
R104, 105	ERJ3GEYJ102V	1/16W 1K
R106	ERJ6GEYJ222V	1/10W 2.2K
R108	ERJ3GEYJ472V	1/16W 4.7K
R109	ERJ3GEYJ473V	1/16W 47K
R141	ERJ6GEYJ473V	1/10W 47K
R142	ERJ3GEYJ104V	1/16W 100K
R151	ERJ3GEYJ152V	3W 1.5K
R153	ERJ3GEYJ224V	1/16W 220K
R154	ERJ3GEYJ822V	1/16W 8.2K
R156	ERJ3GEYJ184V	3W 180K
R157	ERJ3GEYJ363V	3W 36K
R158	ERJ3GEYJ332V	1/16W 3.3K
R171	ERJ3GEYJ100V	1/16W 10
R201	ERJ6GEYJ821V	1/10W 820
R202	ERJ3GEYJ273V	1/16W 27K
R203	ERJ6GEYJ684V	1/10W 680K
R204, 205	ERJ3GEYJ102V	1/16W 1K
R206	ERJ3GEYJ222V	1/16W 2.2K
R208	ERJ3GEYJ472V	1/16W 4.7K
R209	ERJ6GEYJ473V	1/10W 47K
R251	ERJ3GEYJ152V	3W 1.5K
R253	ERJ3GEYJ224V	1/16W 220K
R254	ERJ3GEYJ822V	1/16W 8.2K
R256	ERJ3GEYJ184V	3W 180K
R257	ERJ3GEYJ363V	3W 36K
R258	ERJ3GEYJ332V	1/16W 3.3K
R301	ERJ3GEYJ102V	1/16W 1K
R302	RRSN15J103UE	1/20W 10K
R303	ERJ3GEYJ123V	3W 12K
R304	ERJ6GEYJ103V	1/10W 10K
R305	ERJ6GEYJ272V	1/10W 2.7K
R306	ERJ6GEYJ221V	1/10W 220
R307	ERJ6GEYJ103V	1/10W 10K
R351, 352	ERJ3GEYJ221V	1/16W 220
R353	ERJ3GEYJ100V	1/16W 10
R355	ERJ6GEYJ104V	1/10W 100K
R356	ERJ6GEYJ103V	1/10W 10K
R357, 358	ERJ6GEYJ472V	1/10W 4.7K
R359	ERJ6GEYJ682V	1/10W 6.8K
R360	ERJ6GEYJ103V	1/10W 10K
R361	ERJ3GEYJ103V	1/16W 10K
R500	ERJ3GEYJ103V	1/16W 10K
R501	ERJ3GEYJ101V	1/16W 100
R502	ERJ3GEYJ224V	1/16W 220K
R503	ERJ3GEYJ103V	1/16W 10K
R504	ERJ3GEYJ104V	1/16W 100K
R505	ERJ3GEYJ105V	1/16W 1M
R507	ERJ3GEYJ105V	1/16W 1M
R508	ERJ3GEYJ474V	1/16W 470K
R509	ERJ3GEYJ105V	1/16W 1M
R511	ERJ3GEYJ101V	1/16W 100
R512	ERJ3GEYJ271V	1/16W 270
R513	ERJ3GEYJ105V	1/16W 1M
R514	ERJ3GEYJ684V	3W 680K
R517	ERJ3GEYJ105V	1/16W 1M
R519	ERJ3GEYJ563V	3W 56K
R520-522	ERJ6GEYJ105V	1/10W 1M
R523	ERJ3GEYJ105V	1/16W 1M
R528	ERJ6GEYJ105V	1/10W 1M
R529	ERJ3GEYJ473V	1/16W 47K
R530	ERJ6GEYJ104V	1/10W 100K
R531	ERJ3GEYJ474V	1/16W 470K
		JUMPER RESISTOR(S)
RJ1	ERJ6GEYJ000V	CHIP RESISTOR
RJ4	ERJ3GEYJ000V	CHIP RESISTOR
		CAPACITORS
C1	ECUV1H103ZFN	50V 0.01U
C3	ECUV1H120JCN	50V 12P
C4	ECUV1H431GCN	50V 430P
C5	ECUV1C104MBM	16V 0.1U
C7	ECUV1H050DCN	50V 5P
C10	ECUV1H102MBV	50V 1000P
C12	ECUV1H101KCV	50V 100P
C13	ECUV1E103MBV	25V 0.01U
C14	ECUV1H560KCV	50V 56P
C16	ECUV1C223MBV	16V 0.022U
C17	ECUV1H221KBV	50V 220P
C19	ECUV1C224ZFN	16V 0.22U
C20	ECUV1E473MBN	25V 0.047U
C21	ECUV1C223MBV	16V 0.022U
C22	ECST0GB226RR	4V 22U
C24	ECUV1H102MBV	50V 1000P
C25	ECUV1H102MBN	50V 1000P
C26	ECUV1H040CCV	50V 4P
C28	ECUV1H040CCV	50V 4P
C29	ECUV1C223MBV	16V 0.022U
C30	ECUV1E223MBN	25V 0.022U
C31, 32	ECUV1H100DCV	50V 10P
C33	ECUV1H330KCV	50V 33P
C34	ECUV1H470KCV	50V 47P
C35-38	ECUV1C223MBV	16V 0.022U
C39	ECUV1E103MBV	25V 0.01U
C40	ECEA0GKS221I	4V 220U
C41	ECUV1H471KBV	50V 470P
C42	ECST0GB106RR	4V 10U
C43	ECUV1H221KBV	50V 220P
C44	ECEA0JKS101I	6.3V 100U
C46	ECUV1E223MBN	25V 0.022U
C51	ECUV1H681KBV	50V 680P
C52	ECUV1C224ZF	16V 0.22U
C53	ECUV1C104MBM	16V 0.1U
C54	ECUV1C105ZFM	16V 1U
C55	RCST0GY475LE	4V 4.7U
C56	ECUV1C105ZFM	16V 1U
C57	ECUV1E104ZFM	25V 0.1U

Ref. No.	Part No.	Values & Remarks
C58	ECUV1C153MBV	16V 0.015U
C59	ECUV1E104ZFM	25V 0.1U
C60	ECUV1C104ZFV	16V 0.1U
C61	ECUV1C153MBV	16V 0.015U
C62	ECUV1C223MBV	16V 0.022U
C101, 102	ECUV1H681KBV	50V 680P
C103	ECEA0GKS470L	4V 47U
C104	ECUV1H472MBV	50V 4700P
C107	ECUV1C105ZF	16V 1U
C108	ECUV1C333MBN	16V 0.033U
C141	ECUV1H681KBV	50V 680P
C142	RCST1CY105LE	16V 1U
C143	ECUV1C223MBV	16V 0.022U
C144	ECEA0JKS220L	6.3V 22U
C146	ECEA0GKS221I	4V 220U
C147	ECEA1EK2R2L	25V 2.2U
C148	ECUV1E473MBN	25V 0.047U
C151	ECUV1C334ZF	16V 0.33U
C152	ECEA1EKS4R7L	25V 4.7U
C153	ECUV1H272KBN	50V 2700P
C154	ECUV1C474ZFM	16V 0.47U
C155	ECUV1C154KR	16V 0.15U
C156	ECUV1C333MBN	16V 0.033U
C157, 158	ECUV1H472MBV	50V 4700P
C171	ECEA0GKS221I	4V 220U
C172	ECEA0GKS470L	4V 47U
C201, 202	ECUV1H681KBV	50V 680P
C203	ECEA0GKS470L	4V 47U
C204	ECUV1H472MBV	50V 4700P
C207	ECUV1C105ZF	16V 1U
C208	ECUV1C333MBN	16V 0.033U
C251	ECUV1C334ZF	16V 0.33U
C252	ECEA1EKS4R7L	25V 4.7U
C253	ECUV1H272KBN	50V 2700P
C254	ECUV1C474ZFM	16V 0.47U
C255	ECUV1C154KR	16V 0.15U
C256	ECUV1C333MBN	16V 0.033U
C257, 258	ECUV1H472MBV	50V 4700P
C301-303	ECUV1E104MBM	25V 0.1U
C304	ECEA1HKS010L	50V 1U
C305, 306	RCST1CY105LE	16V 1U
C307	ECEA1HKS010L	50V 1U
C351	ECEA0JKS101I	6.3V 100U
C352	ECUV1C105ZF	16V 1U
C353	ECUV1H150KCV	50V 15P
C354	ECUV1H821KN	50V 820P
C355	ECUV1C104MBM	16V 0.1U
C357	ECUV1C105ZF	16V 1U
C360	ECUV1E103MBV	25V 0.01U
C361	ECUV1H040CCV	50V 4P
C362	RCST1CY105LE	16V 1U
C363	ECUV1E223MBN	25V 0.022U

Ref. No.	Part No.	Values & Remarks
C364	ECUV1E103MBV	25V 0.01U
C381	ECUV1H103ZFN	50V 0.01U
C501	ECUV1C104MBM	16V 0.1U
C502	ECUV1E473MBN	25V 0.047U
C503	ECUV1C104MBM	16V 0.1U
C504	ECUV1C105ZF	16V 1U
C505, 506	ECEA0GKS471I	4V 470U
C507	ECEA1EKS4R7L	25V 4.7U
C508, 509	ECUV1H100DCV	50V 10P
C515	ECUV1E103MBN	25V 0.01U
C516	ECUV1E223MBN	25V 0.022U
C517	ECUV1E103MBV	25V 0.01U
C518	ECUV1E103MBN	25V 0.01U
C519	ECUV1E223MBN	25V 0.022U
C529	RCST0GY475LE	4V 4.7U

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